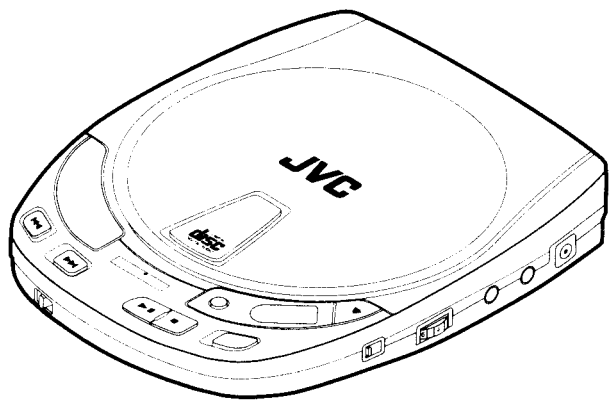
JVC

SERVICE MANUAL

PORTABLE CD PLAYER

XL-P42BK



COMPACT disc DIGITAL AUDIO

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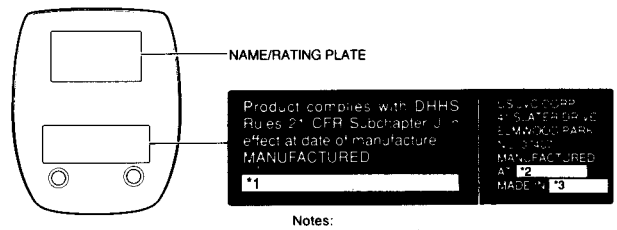
No. 1983
May 1996

■ Safety Precautions

IMPORTANT FOR LASER PRODUCTS (For U.S.A. only)

1. CLASS 1 LASER PRODUCT
2. **DANGER:** Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. **CAUTION:** Do not open the rear cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.
4. **CAUTION:** The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent the emission of radiation when the lid is open. It is dangerous to defeat the safety switches.
5. **CAUTION:** Use of controls for adjustments and the performance of procedures other than those specified herein may result in exposure to hazardous radiation.
6. **CAUTION:** The laser is able to function, if safety switches are out of function. The laser light is invisible, avoid exposure, do not disassemble the laser unit, but replace the complete unit.

IDENTIFICATION LABEL AND CERTIFICATION LABEL



Notes:
*1 The date of manufacture.
*2 The ID code of manufacturing plant.
*3 Marking of country origin.

INFORMATION (For U.S.A.)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

INFORMATION (For Canada)

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Department of Communications.

ATTENTION: (For U.S.A.)

The product that you have purchased is powered by a rechargeable battery. The battery is recyclable. At the end of it's useful life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal.

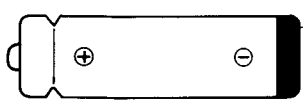
Ni-Cd

IMPORTANT SAFETY INSTRUCTIONS

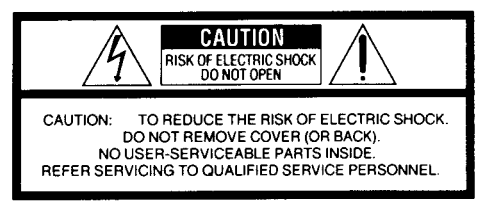
CAUTION:

CHARGE ONLY Ni-Cd RECHARGEABLE BATTERIES, TYPE BN-R122 or EQUIVALENT. OTHER TYPES OF BATTERIES MAY BURST CAUSING PERSONAL INJURY AND DAMAGE.

*For more details, consult your nearest JVC dealer.



Negative ⊖ side of battery is NOT covered.
(DC 1.2V, 600 mAh)


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK.
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

1. **AC adapter**
   Be sure to unplug the AC adapter from the wall AC outlet when not in use.
2. **Do NOT expose the unit(s) to drips or splashes of water.**
   If water gets inside the unit, unplug the AC adapter from the wall AC outlet and consult your dealer.
3. **Do NOT touch the interior parts.**

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION

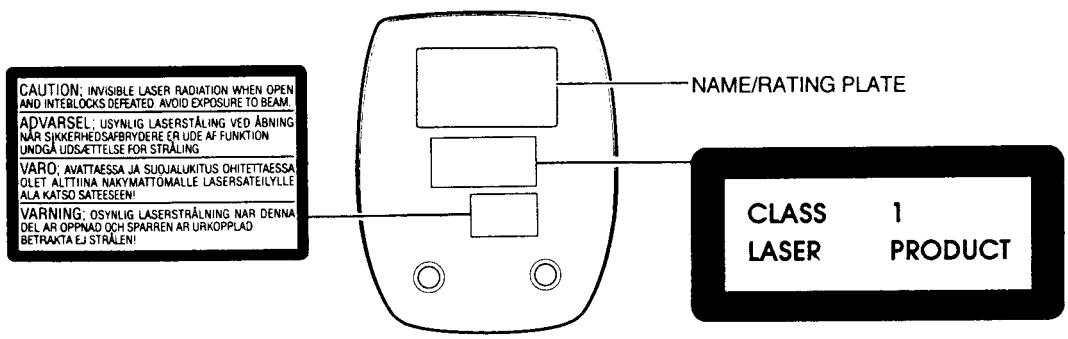
Care in the use of this product with headphones is highly recommended when operating a bicycle, motorcycle, moped, snowmobile or any such vehicle upon a public street, or while walking in traffic or congested areas. It is further recommended that reduced volume be used under conditions above to allow ambient sound to be heard.
In some states, cities, towns, or local areas, use of this product may be prohibited in public while using headphones. Please check your local ordinances.

B/E/G Only

Important for Laser Products

1. CLASS 1 LASER PRODUCT
2. **DANGER:** Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. **CAUTION:** Do not open the bottom cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.
4. **CAUTION:** The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when unloading cartridge and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
5. **CAUTION:** Use of controls of adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

REPRODUCTION OF LABELS AND THEIR LOCATION


CAUTION: INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL: USYNLIG LASERSTÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSÆTTELSE FOR STRÅLING
VARO: AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSATEILYLLE ÄLÄ KATSO SÄTEESEEN!
VARNING: OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD BETRAKTA EJ STRÅLEN!
NAME/RATING PLATE
CLASS 1
LASER PRODUCT

ADVERSEL: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

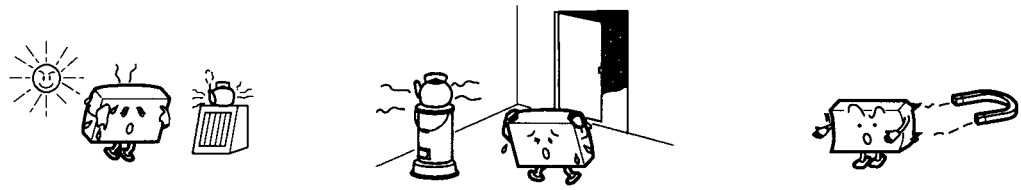
VAROITUS: Varmuuskytkimen oliessa pois päältä kun laite avataan, siellä kehittyy näkymätöbtä lasersäteilä. Älä pane itseäsi säteilyn altiiksi.

VARNING: Osynlig laserståining uppstår vid komponentens öppning när säkerhetsbrytaren är frånslagen.

ADVARSEL: Usynling laserstråling ved åpning når sikkerhetsbryteren er ude af funktion Unngå utsettelse for stråling.

■ Instructions

HANDLING PRECAUTIONS



- Do NOT use this unit at excessive low or high temperatures. The recommended temperature range is 5°C (41°F) to 35°C (95°F).

Do NOT use this unit in direct sunlight or leave it in a closed automobile (or yacht, etc.) where it could be exposed to high temperatures (above 40°C [104°F]).

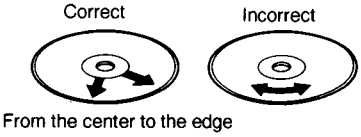
1. **Avoid installing in the following places**
   - Where it could be subject to vibrations.
   - Where it is excessively humid, such as in a bathroom.
   - Where it could be exposed to a magnetic field from a magnet or speaker.
   - Where it would be subject to dust.
2. **Condensation**
   In the following cases, condensation may form on the lens and the CD player may NOT operate correctly.
   - In a room where a heater has just been turned on.
   - In a place where there is smoke or high humidity.
   - When it is moved suddenly from a cold to a warm room.

   In those cases, wait for about one hour before use.
3. **Keep the CD player away from your tuner or TV**
   When the CD player is used near a tuner or TV, the tuner may pick up noise or the TV picture may be distorted. Leave an appropriate distance between the CD player and tuner or TV. If this is still not enough to eliminate the interference, set the power switch of the CD player to OFF.
4. **Cleaning the cabinet**
   If the cabinet becomes dirty, wipe it with a soft, dry cloth. NEVER use benzine or thinner as these could damage the surface finish.
5. **When listening with headphones**
   - Turn down the volume so as NOT to damage your ears.
   - For safety, do NOT drive while listening to the unit.
6. **Volume setting**
   CDs produce very little noise compared with analog sources. If the volume level of an amplifier is adjusted for these sources, the speakers may be damaged by the sudden increase in the output level. Therefore, lower the volume before operation and adjust it as required during playback.
7. **Do NOT place a cassette tape, etc. near the unit**
   Since this unit incorporates a magnet, do NOT place recorded tapes or magnetic cards near it as important recorded materials may be erased.

CONCERNING COMPACT DISCS

1. **Usable compact discs**
   Use only CDs with the following mark;
2. **Notes on handling discs**
   - Do NOT touch the rainbow color reflecting recorded surface.
   - Do NOT stick paper or write anything on the label surface.
   - Do NOT bend the disc.
3. **Storage**
   - For storage, be sure to return a disc to its case.
   - Do NOT expose discs to direct sunlight, high temperature such as from a heater, high humidity, or dust.
4. **Cleaning a disc**
   Before operation, wipe off dust, dirt and fingerprints on the disc surface with a soft cloth. The disc should be cleaned by wiping from the inside to the edge, NOT circularly.

COMPACT disc DIGITAL AUDIO

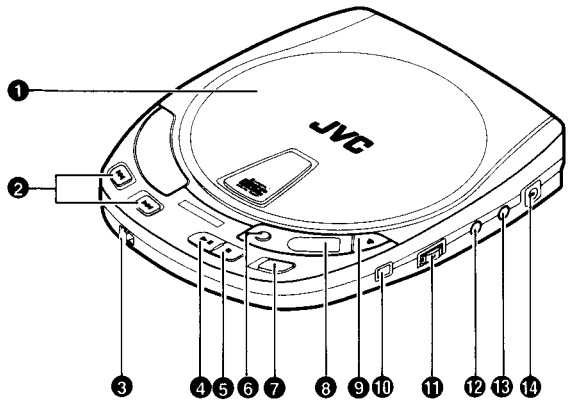


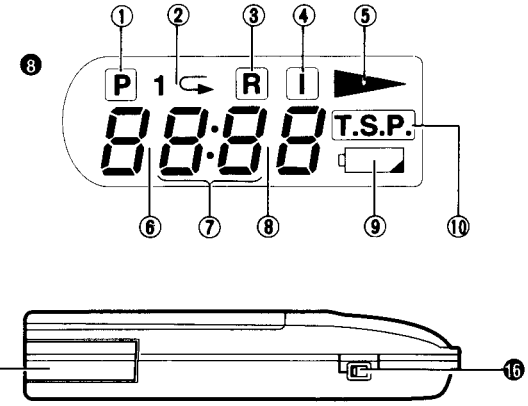
From the center to the edge

- NEVER use thinner, benzine, analog record (LP) cleaner or antistatic spray.

8-cm (3-3/16") "CD singles"
- 8-cm (3-3/16") compact discs can be used in this unit without an adapter.

NAMES OF PARTS AND THEIR FUNCTIONS



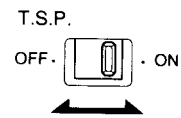


❶ **Lid**
❷ **Search (⏮, ⏭) buttons**
❸ **Triple shock protection (T.S.P.) switch**
❹ **Play/pause (⏯) button**
❺ **Stop/clear (■) button**
❻ **REPEAT/RANDOM/INTRO button**
❼ **PROGRAM/DISPLAY button**
❽ **Display window**
  ① Program (P) mode indicator
  ② Repeat play (1 ↻) indicator
  ③ Random (R) indicator
  ④ Intro scan (I) indicator
  ⑤ Playback indicator (▶)
  Pause indicator (▶)
  ⑥ Time (minute)/Program order number display
  ⑦ Track (tune) number display
  ⑧ Time (second) display
  ⑨ Battery (▭) indicator
  ⑩ Triple shock protection (T.S.P.) indicator
❾ **Open button (⏏)**
❿ **Hyper-Bass sound (HBS) switch**
⓫ **VOLUME control**
⓬ **PHONES jack**
⓭ **LINE OUT jack**
⓮ **DC IN 6V (⊖-⊂-⊕) jack**
⓯ **Battery compartment cover**
⓰ **HOLD switch**

Triple Shock Protection (T.S.P.)

New anti-vibration system developed by taking advantage of three technologies (shock proof memory/high-speed pickup servo/dynamic suspension).

- Set the T.S.P. switch to ON in conditions where sound may tend to be interrupted. (The T.S.P. is shown in the display window.)



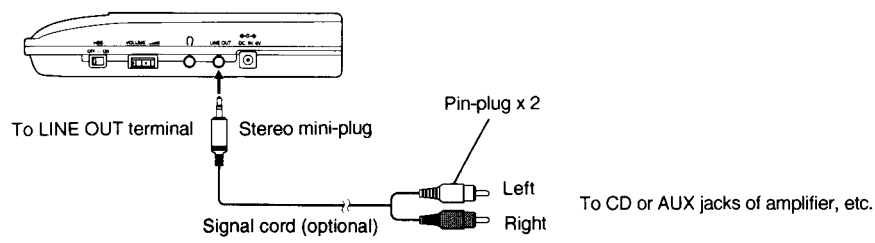
- When using batteries, set the T.S.P. switch to ON; playback time becomes shorter compared with when T.S.P. is set to OFF.

Notes:

- Because a disc rotates at double the normal speed when T.S.P. is set to ON, CD play with T.S.P. may produce more turning noise than usual. However, this condition is not a malfunction.
- Even with T.S.P. set to ON, sound may be interrupted during use if a large shock is applied to the unit or the CD being used has a large scratch on it.

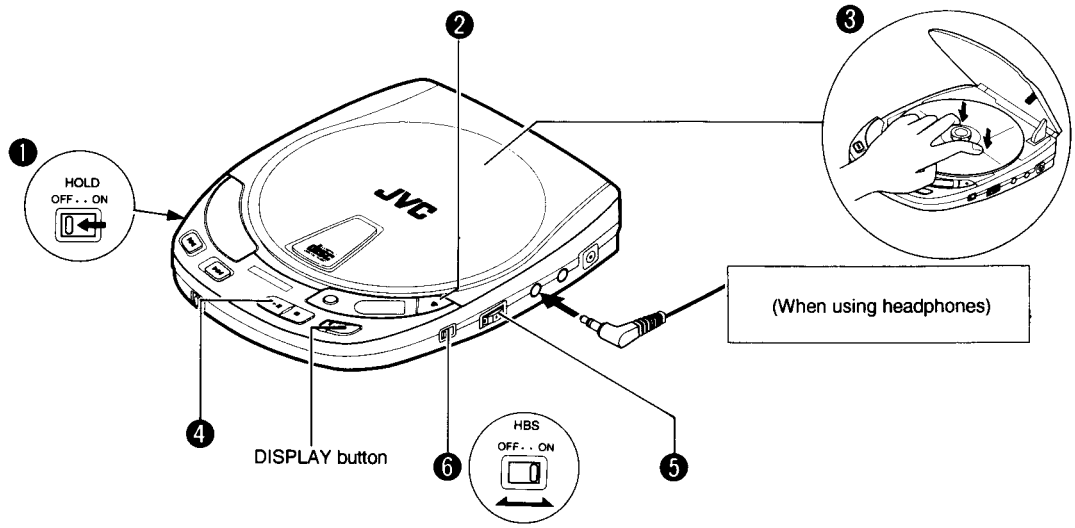
CONNECTIONS

- When the CD player is connected directly to an amplifier, etc...



- Do NOT switch the power ON until all the connections are completed.
- Insert plugs firmly; poor contact can cause noise.
- When the LINE OUT terminal is used, the volume control and HBS switch are NOT effective.

PLAYING COMPACT DISCS

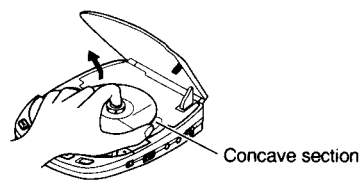


To play all tunes

1. Set the HOLD switch to the OFF (release) position.
2. Press to open the lid; open further by hand.
3. Load a disc with the label facing up. Press the section shown by the arrow until you hear the mechanism engage. Close the lid.
4. Press the ►II button to start play.
5. Adjust the volume.
6. Set the HBS switch as required.

- DISPLAY button
  During CD play, each time this button is pressed, the track number being played and play time are alternately displayed.
- HOLD switch
  As long as the HOLD switch is activated, the unit locks onto the current mode and cannot be switched to another mode, even if the latter mode button is pressed. However, volume control and HBS switches function when HOLD is activated.

Note:
- When removing a 8-cm (3-3/16") CD, using the concavity makes removal easier.



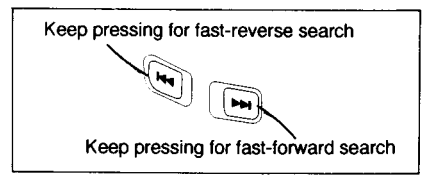
Skip play

To listen to the next tune...
Press the ►►I button once to skip to the beginning of the next tune.

To listen to the previous tune...
Press the I◄◄ button to skip to the beginning of the tune being played back and press again to skip to the previous tune.

Search play

- The required position can be located using fast-forward or reverse search during play.



Note:
- When executing search play with T.S.P. ON, noise may increase. However, this condition is not a malfunction.

To stop play

- **To stop a disc temporarily**
  Press the ►II button (The "►" indicator blinks.) When pressed again, play resumes.

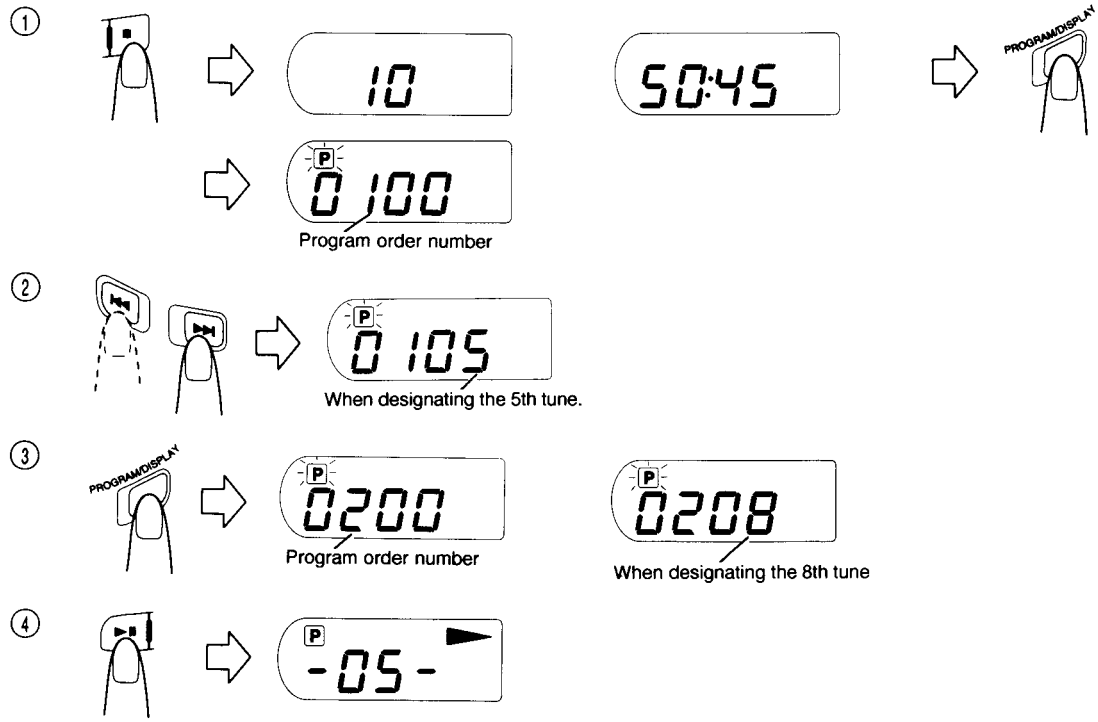
- **To stop playback in the middle of a disc**
  During play, press the ■ button to stop play. The total number of tracks and total playing time are alternately displayed. To switch off the power, press the ■ button again.

- **Auto power off function**
  When left in the stop mode for more than approx. 2 minutes, power is switched off automatically.

Note:
- The following indication may be shown when a disc is dirty or scratched, or when the disc is loaded upside down.
  In such a case, check the disc and insert again, and clean or change the disc.

Programmed play

- Programmed play of up to 24 tunes (max.) can be performed in any required order.



① During play, press the ■ button. While the total number of tracks and total playing time are alternately displayed, press the PROGRAM button to enter programming mode. (Press the PROGRAM button within 2 minutes after pressing the ■ button).
- The "P" indicator blinks.

② Press to designate the required track number.
- To count down the track numbers, press the ⏮ button.

③ Press the PROGRAM button to program the track (tune) number.
- Repeat steps ② and ③ to program other tunes.

④ Press the ▶II button when programming is completed. Programmed play starts.

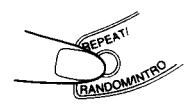
To confirm the numbers of programmed tunes...
During CD Stop mode, each time the PROGRAM button is pressed, the number of programmed tracks are displayed in their programmed order.

To clear programmed tunes...
Press the ■ button twice before starting play or during programmed play. When the lid is opened or power is switched off automatically, the programmed tracks are automatically cleared.

Notes:
- It is impossible to program 25 or more tunes. If it is attempted, "FuLL" is shown in the display.
- If no button is pressed while the unit is in programming mode, power switches off automatically after approx. 2 minutes.

Repeat/Random/Intro scan play

Each time the REPEAT/RANDOM/INTRO button is pressed, the mode will change from single tune repeat, all tune repeat, random, intro to clear mode.



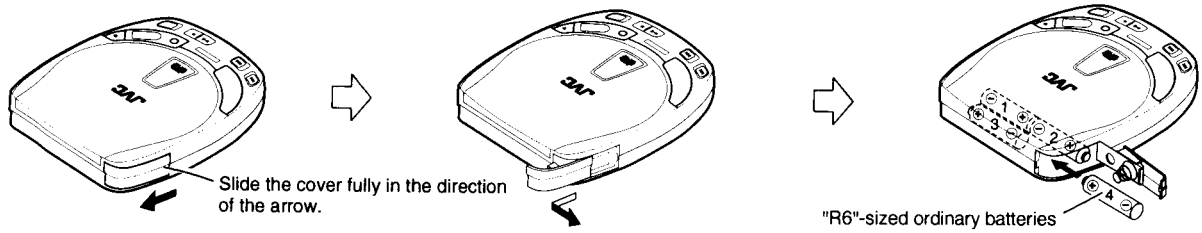
- **Repeat play of a single tune (1)**
  The tune being played can be heard repeatedly.
- **Repeat play of all tunes (↻)**
  When playing an entire disc or programmed tunes, all the tunes or the programmed tunes can be heard repeatedly.
- **RANDOM play (R)**
  When random mode is set, each tune is played, in random order.
- **INTRO-scan operation (I)**
  When intro-scan mode is set before or during play, the first 10 seconds of all tunes or programmed tunes are played.

POWER SUPPLY

• Ordinary batteries are NOT provided with XL-P42.

A. Operation on ordinary batteries

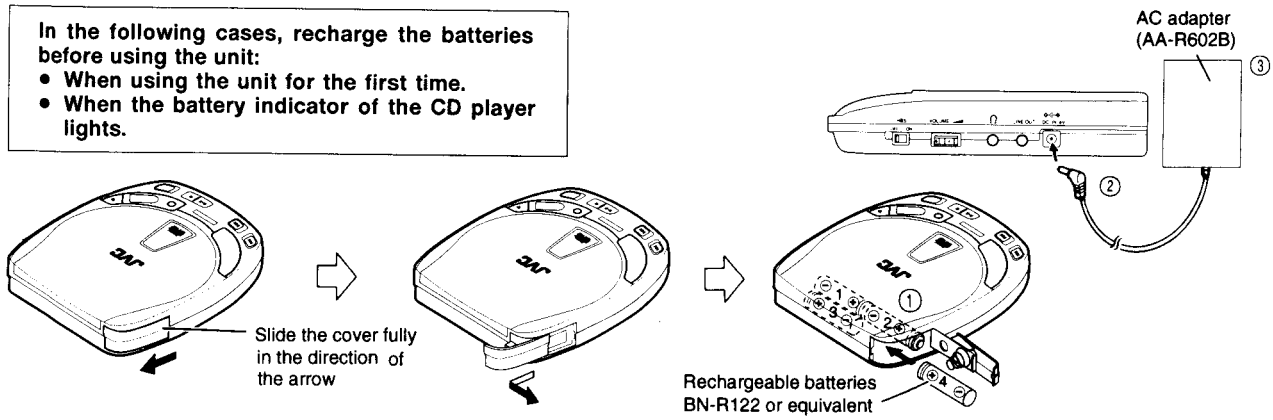
• Insert batteries.



B. Operation with rechargeable batteries

• **Recharging**

In the following cases, recharge the batteries before using the unit:
- **When using the unit for the first time.**
- **When the battery indicator of the CD player lights.**



① Insert the rechargeable batteries.
② Connect to the DC IN jack.
③ Connect to the AC outlet.

• Recharging will be completed after 6 hours. The batteries' duration is about 2.5 hours.

Cautions:
- NEVER charge with other than the AC adapter provided.
- Do NOT contact the poles (+ or –) of the rechargeable batteries with a metal object since this could cause short-circuiting.
- After initial charging, or after the battery has not been used for an extended period of time, battery life may become shorter than normal. This should return to normal after the battery is charged and discharged several times.
- When charging is finished, unplug the AC adapter from the DC in jack and wall outlet.
  Although there is no safety problem if left plugged in, we recommend that it is unplugged within 10 hours.
- When ordinary batteries have been loaded, they cannot be recharged using the AC adapter.
  If an ordinary battery with the seal of its negative ⊖ pole damaged is loaded, it might be recharged erroneously.
  This is very dangerous; be careful NOT to use damaged batteries.
- When the battery working time becomes short even when the battery is fully charged, this indicates that the battery is near the end of its life. Consult your JVC dealer or service station.
- The batteries become slightly warm during recharging, however, it is NOT a malfunction.
- Do NOT mix new and old batteries, or mix different types of batteries.
- If electrolyte from a damaged battery should get on your skin or clothes, wash off immediately with water.

- **Battery replacement**
  When the battery (▭) indicator lights during rechargeable or ordinary battery operation, it shows that the batteries are nearly exhausted. (With some batteries, even though the power is exhausted, the (▭) indicator does NOT light and operation becomes unstable.) In such cases, recharge the batteries or replace them with new ones.

C. Operation on household AC

• **Use the provided AC adapter AA-R602B.**

Notes:
- NEVER use an AC adapter other than that specified to avoid malfunctions and accidents.
- Be sure to remove the batteries when the AC adapter is to be used for an extended period of time.

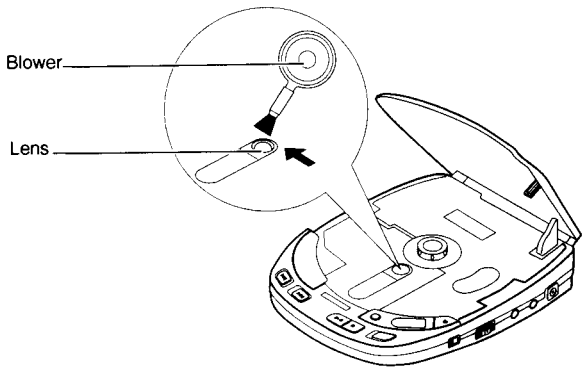
D. Operation using car adapter

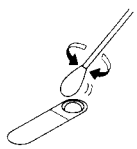
• Use the car adapter CA-R60 (optional) exclusively for this unit.

MAINTENANCE

Cleaning the lens
If the lens is dirty, CD play may be impossible because of mistracking, etc.
Open the lid and clean the lens as shown.

- Use a blower (available from a camera store, etc.) to blow dust off the lens.
- When there are fingerprints on the lens, wipe gently with a cotton swab.





TROUBLESHOOTING

What appears to be trouble is not always serious.
Make sure first...

1. **The lid cannot be closed.**
* Is the disc warped?
2. **The disc is loaded, however, CD play cannot be performed.**
* Is the HOLD switch set to the ON position?
* Is the disc upside down?
* Is the disc dirty?
* Is the disc damaged or warped?
* Is the lens dirty?
* Is there condensation on the lens? If there is, wait for about one hour before use.

3. **A specific section is not played correctly.**
* Is the disc damaged? If so, skip the damaged section when playing the disc.

SPECIFICATIONS

Portable CD player XL-P42

Type	:	Compact disc player
Signal detection system	:	Non-contact optical pickup (semiconductor laser)
Pickup system	:	3 beam laser
Number of channels	:	2 channels (stereo)
Frequency response	:	20 Hz to 20,000 Hz
Wow & flutter	:	Unmeasurable
Output	:	Line out (3.5 mm dia. stereo x 1) 600 mV/100 kohms Headphone (3.5 mm dia. stereo x 1) 8 mW/ch at 5 % THD/20 ohms matching impedance (16 ohms to 1 kohm)
Duration of battery (with T.S.P. OFF)	:	Approx. 2.5 hours when using a rechargeable battery (BN-R122 or equivalent) charged for 6 hours, Approx. 8 hours when using an alkaline battery (LR6-Panasonic)
Power requirements	:	DC 6 V (R6 size battery x 4) DC 4.8 V (Rechargeable battery x 4) DC IN 6 V
Dimensions (W x H x D)	:	135 x 34 x 166 mm (Excluding buttons and controls)
Weight	:	Approx. 285 g (without batteries)
Accessories provided	:	AC adapter x 1 Headphone x 1 Rechargeable battery (BN-R122 or equivalent) x 4

AC adapter AA-R602B

Input power source	:	AC 230 V, 50 Hz
Output voltage	:	DC 6 V, 450 mA

Rechargeable batteries (BN-R122 or equivalent)

Type	:	Ni-Cd rechargeable battery
Battery life	:	Repeat recharging approx. 300 times
Output voltage	:	DC 1.2 V

Design and specifications are subject to change without notice.

CAUTION
Care in the use of this product with headphones is highly recommended when operating a bicycle, motorcycle, moped, snowmobile or any such vehicle upon a public street, or while walking in traffic or congested areas. It is further recommended that reduced volume be used under conditions above to allow ambient sound to be heard.
In some states, cities, towns, or local areas, use of this product may be prohibited in public while using headphones. Please check your local ordinances.

1 Location of Main Parts

This picture shows a sample set.

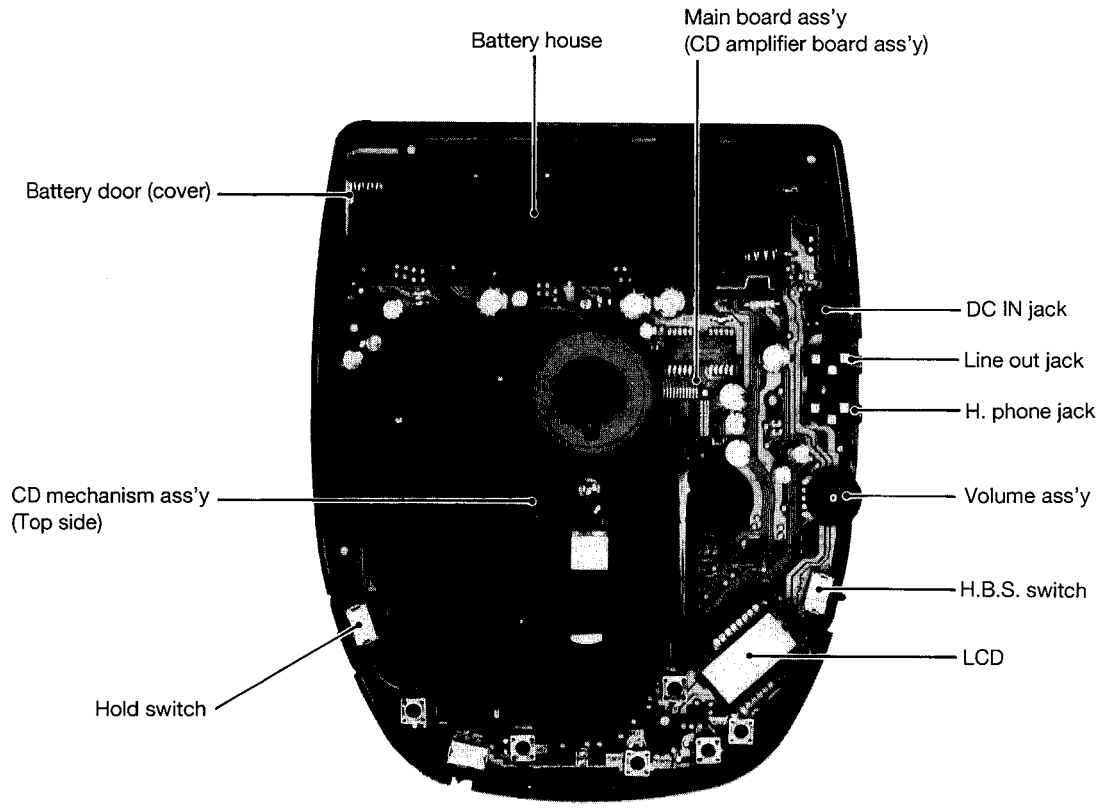


Fig. 1-1

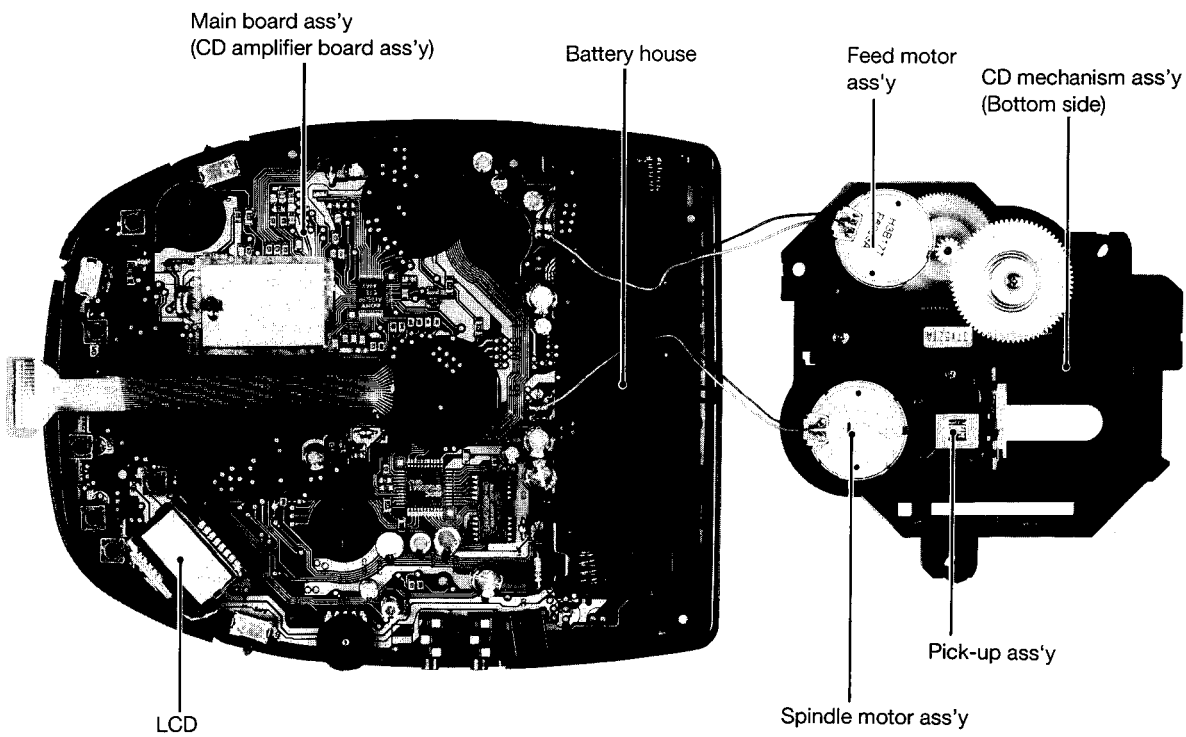


Fig. 1-2

1 Location of Main Parts

This picture shows a sample set.

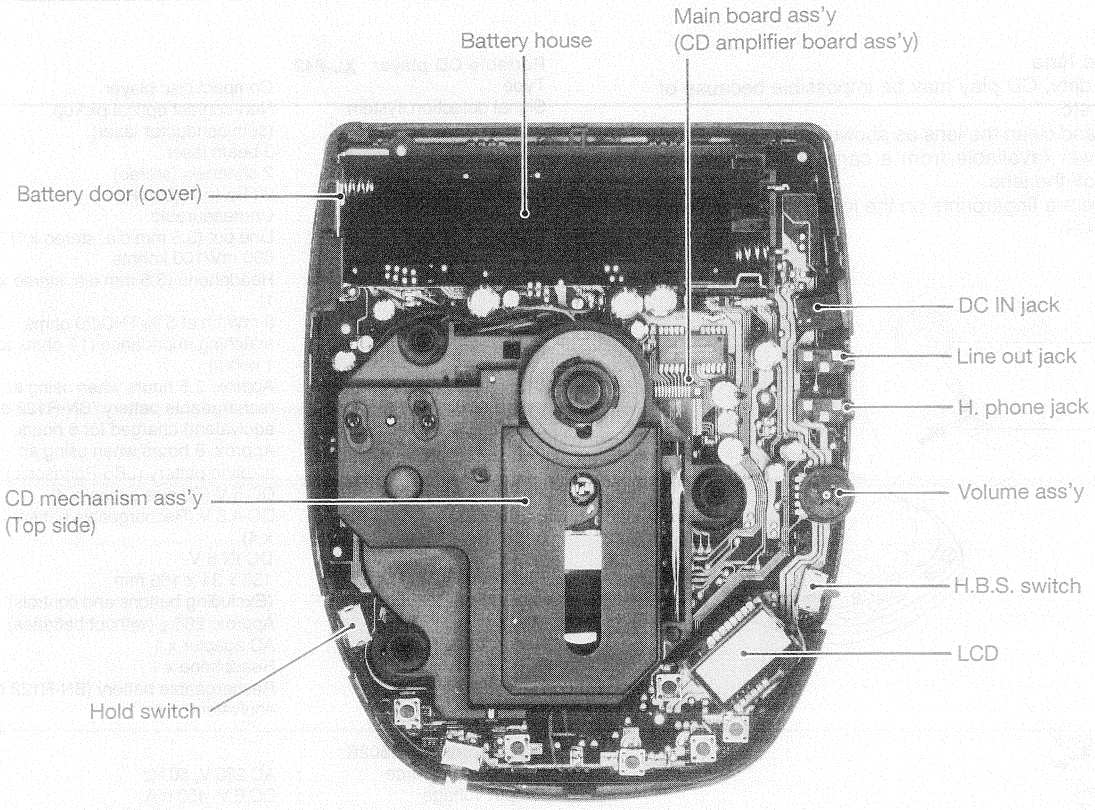


Fig. 1-1

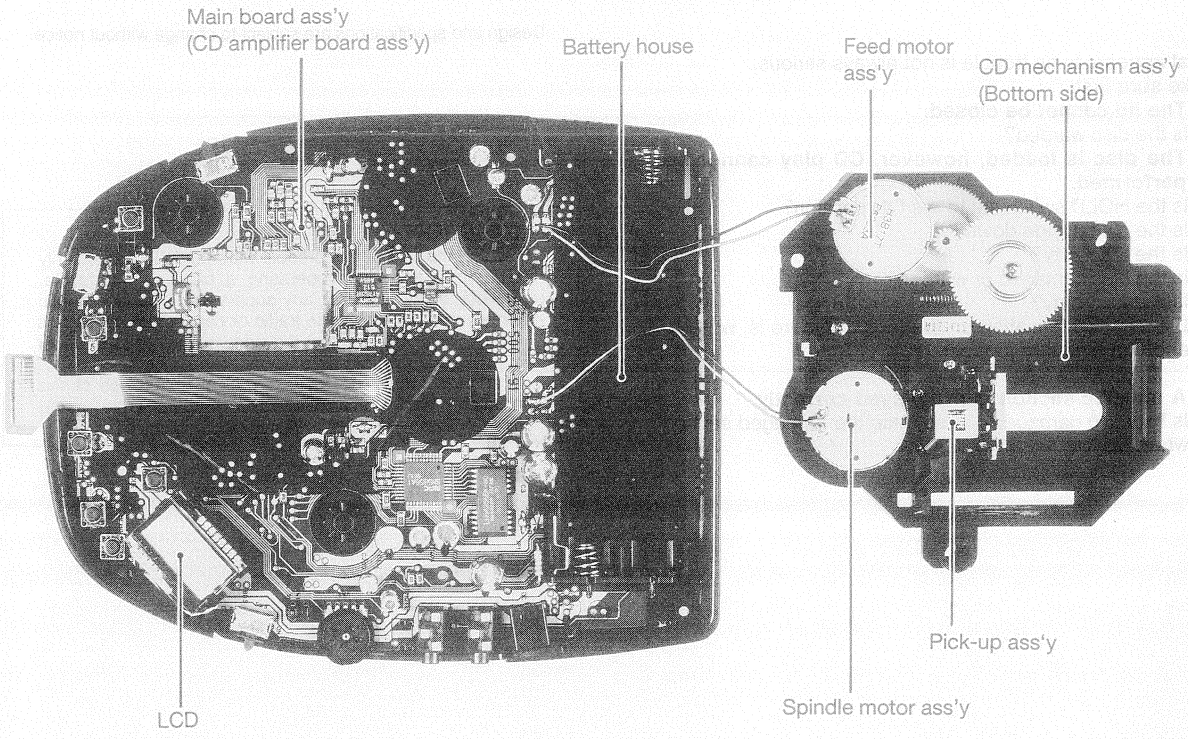


Fig. 1-2

2 Removal of Main Parts

■ Instructions for handling the optical system block pickup

Electrostatic breakdown of the laser diode in the optical system block may occur due to a potential difference caused by electrostatic charge accumulated on clothing on the human body etc.

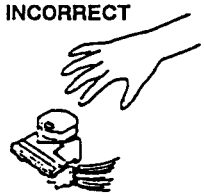
A ground must be provided as follows to prevent any electrostatic charge during unpacking or repair work.

① Be sure to wear a grounded band(1M ohm)that is properly grounded to remove any static electricity that may be charged on your body.

② Be sure to place a conductive sheet(1M ohm) or copper plate with proper grounding on the workbench or any other surface onwhich the pickup is be to placed.

③ Because the static electricity charge on clothing dose not discharge through the body grounding band do not let clothing contact the pickup unit.

INCORRECT



Note: Laser diodes are so susceptible to damage from static electricity that even if a static discharge does not ruin the diode, it can shorten its life or cause it to work improperly.

Fig. 2-1

CORRECT

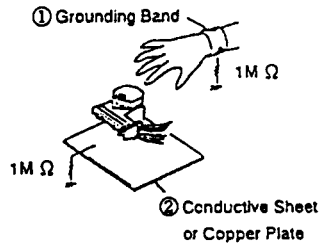


Fig. 2-2

■ Precaution for checking beam emission of laser diode

The laser beam of this unit is focused on reflecting surface of the objective lens in the optical system block.

Therefore, keep your eyes at least 12 inches(30 cm) away from the objective lens when the laser diode is "ON".

■ Operation check method for laser diode and focus search function

When the "POWER"switch is turned "ON"after the chucking arm is removed observe the objective lens and confirm that the following operations are done properly (The optical system block should be positioned at the lead in area when checked.)

① The disc table should be at the innermost position after the chucking arm is removed.

② The diffused light of the laser beam can be seen when the "POWER"switch is turned "ON".

③ Vertical(Up and down)movement of the objective lens (2 or 3 time) will take place.

Caution :

Laser diodes are extremely suseptible to damage from static electricity.

Even if a static dischage does not ruin the diode, it can shorten its life or cause it to work improperly.When replacing the pickup use a conductive mat and a grounded soldering iron to help protect the laser diode from static damage.

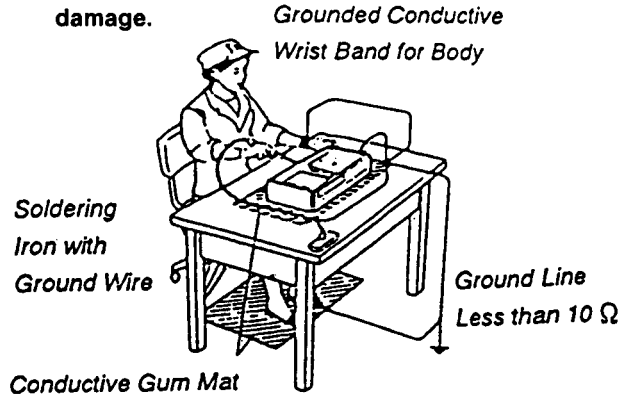


Fig. 2-3

■ Disassembly Instruction

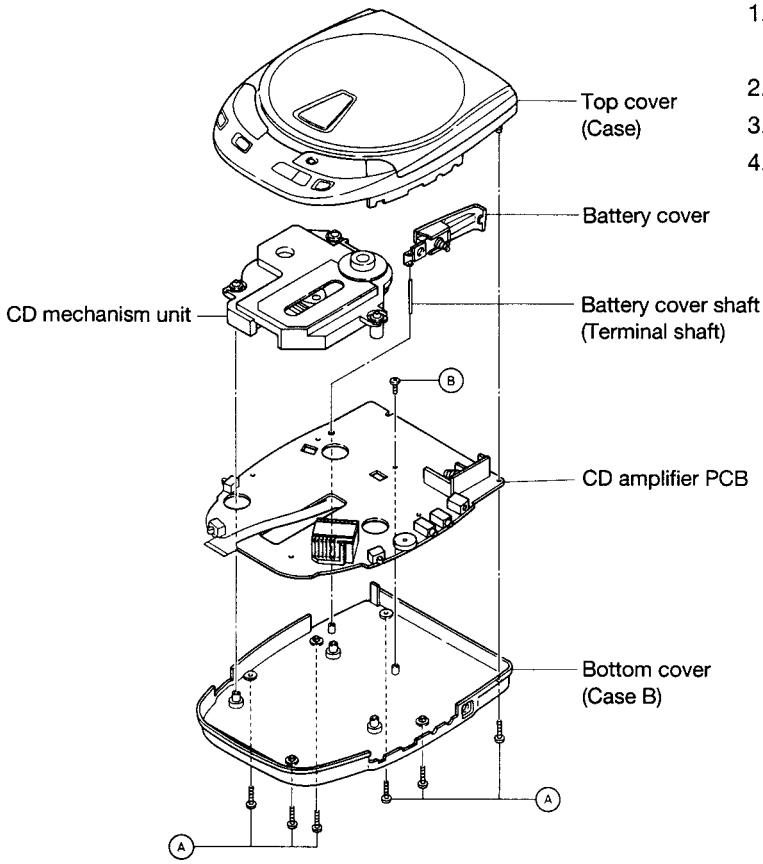


Fig. 2-4

1. Remove six screws Ⓐ holding the top cover to bottom cover.
2. Remove the CD mechanism unit.
3. Remove the terminal shaft holding the battery cover.
4. Remove screw Ⓑ holding the CD amplifier PCB.

■ XL-P42 Disassembling Procedure

◆ Removing the Bottom Cover (Rear cabinet)

(Fig.2-2~Fig. 2-3)

1. Slide the battery compartment cover until it opens slightly.
2. Remove the six bottom cover retaining screws ①.
3. Gently remove the bottom cover.

* When reassembling, confirm that the motor wire is not hung up on the mechanism rubber cushion before attaching the cover.

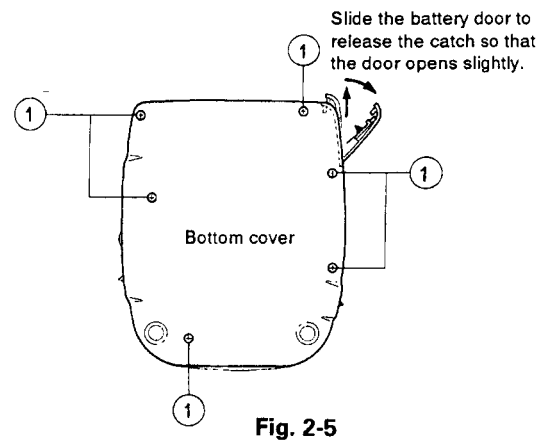


Fig. 2-5

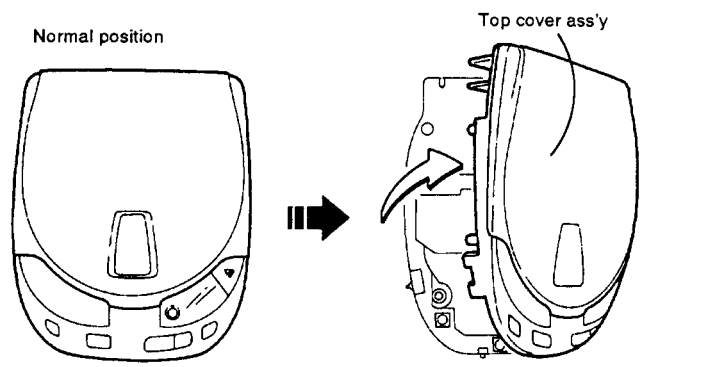


Fig. 2-6

With the unit irs normal position,remove the top vover in direction of the arrow.

◆ Removing the Top Cover (Front cabinet)(Fig.2-4)

1. Remove the bottom cover (see above).
2. Place the unit in its normal position (front side up).
3. Gently remove the top cover.
4. The CD mechanism ass'y is now on top of the main PCB ass'y.
   * When reassembling, set so that the top cover's stud fits into the mechanism rubber cushion.

◆ Removing the CD Mechanism Assembly (Fig.2-4)

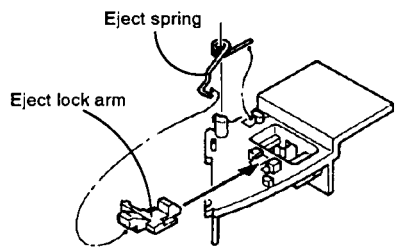
1. Remove the bottom cover.
2. Remove the top cover.
3. Disconnect the mechanism connection wires from the main PCB ass'y.
   1) Desolder the two spindle motor wires and the two feed motor wires connected to the main PCB ass'y.
   2) Disconnect the flexible wire from the CD pickup ass'y connector.

◆ Removing the CD Door (Fig.2-5~2-6))

1. Push the CD door open button to open the door.
2. With the CD door fully opened, while pressing the left side of the door, pull it out at a right angle to the top cover. Then open the door halfway and twist it 10 or 20 degrees counterclockwise to completely remove the CD door.
   * To reassemble: Perform steps 1 and 2 in the reverse order. With the door twisted 10 or 20 degrees counterclockwise, insert the door arm into the door shaft. Then open the door completely and push it into place.

◆ Removing the Door Open Button (Fig.2-5~2-6))

1. Remove the top cover.
2. Remove the door button retaining screw ②.
3. The door button and the door lock holder are now disengaged.



Note the mounting direction of the lock arm, and slide it into the hook.

Fig. 2-10

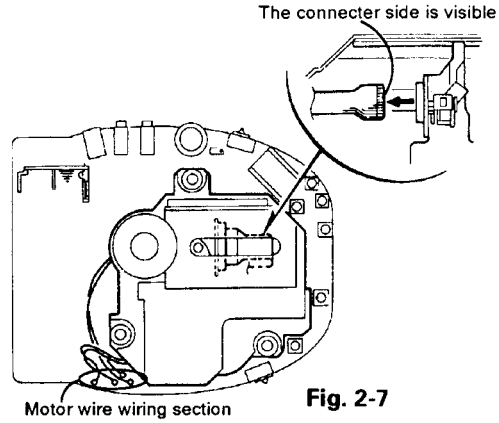


Fig. 2-7

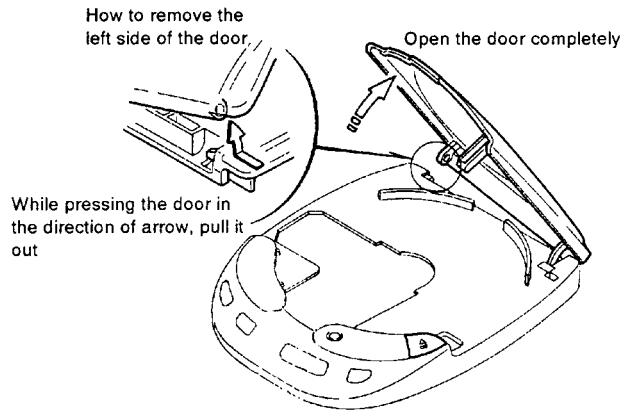

How to remove the left side of the door
Open the door completely
While pressing the door in the direction of arrow, pull it out

Fig. 2-8

To remove the right side of the door:
Open the door halfway, then twist it in the direction of the arrow (by 10 – 20 degrees) to disengage the door arm.

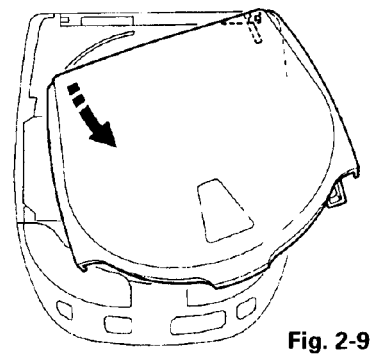


Fig. 2-9

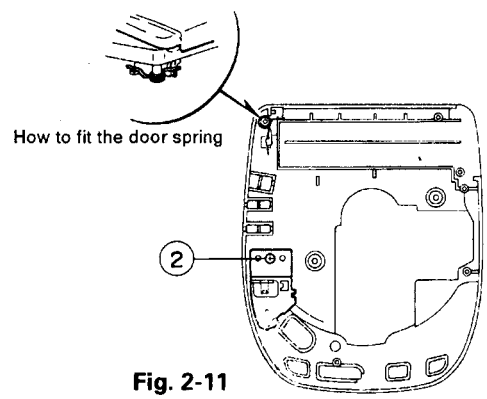


Fig. 2-11

■ CD Mechanism Section

◆ Removing the Pickup Assembly (Fig.2-10)

1. Remove the clutch gear retaining screw ③ and pull the gear straight up and out.
2. Remove the pickup shaft retaining screw ④.
3. Remove the pickup assembly from the mechanism chassis in the direction of the shaft retaining screw ④.

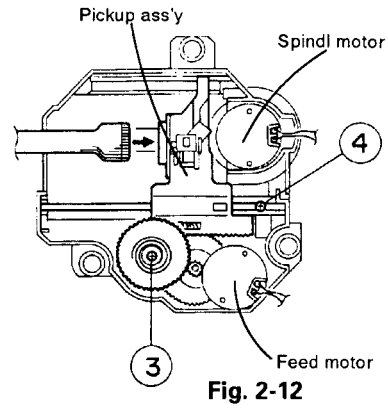


Fig. 2-12

◆ Removing the Feed Motor Ass'y (Fig.2-11)

1. Remove the two feed motor ass'y retaining screws ⑤, and the feed motor ass'y can be removed.
2. The idler gear can now be removed.

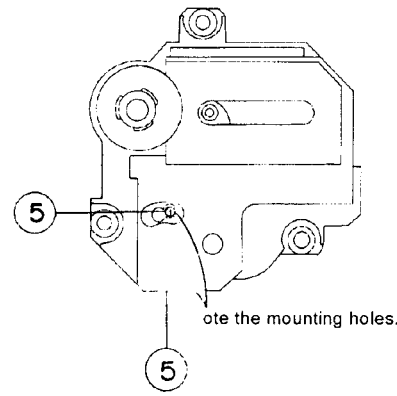


Fig. 2-13

◆ Removing The Spindle Motor/Turntable Ass'y

(Fig.2-12~2-13)

1. Rotate the feed gear in the direction of the arrow to draw the pickup ass'y toward the outer edge (as indicated by the arrow).
2. Remove the two spindle motor retaining screws 6 from the hole on the top surface of the turntable. (The screws are located at diagonal positions around the motor shaft.)
3. Incline the turntable (as shown in the diagram) and slide it toward the pickup by passing it under the mechanism chassis.

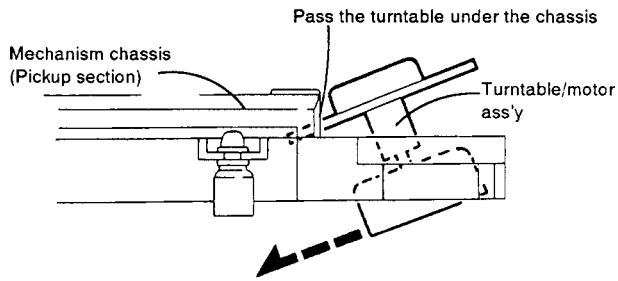


Fig. 2-14

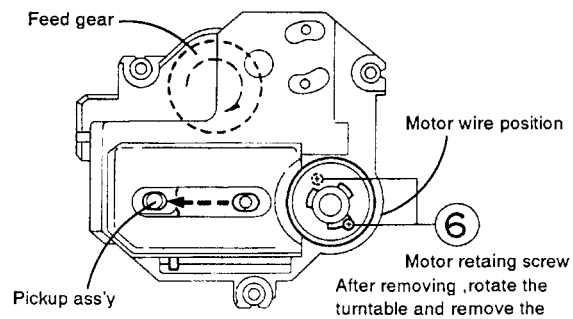
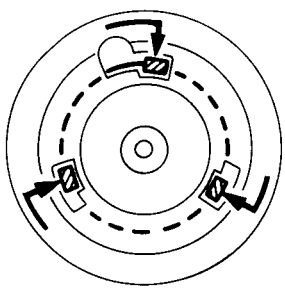


Fig. 2-15



Turn the lockup pawls that fasten the pickup ass'y to the turntable clockwise first, and push them toward the shaft for unlocking the pickup ass'y.

Fig. 2-16

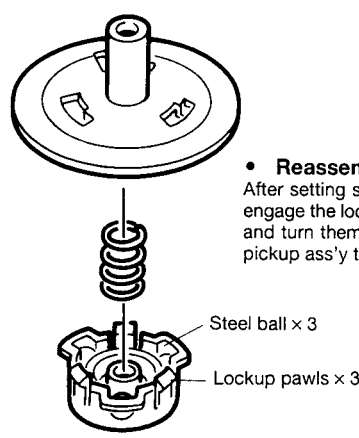


Fig. 2-17

- **Reassembling**

After setting steel balls in the bearing cap (a), engage the lockup pawls with the pickup ass'y and turn them counterclockwise to fasten the pickup ass'y to the turntable.

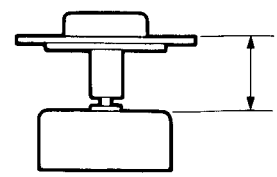


Fig. 2-18

3 Main Adjustment

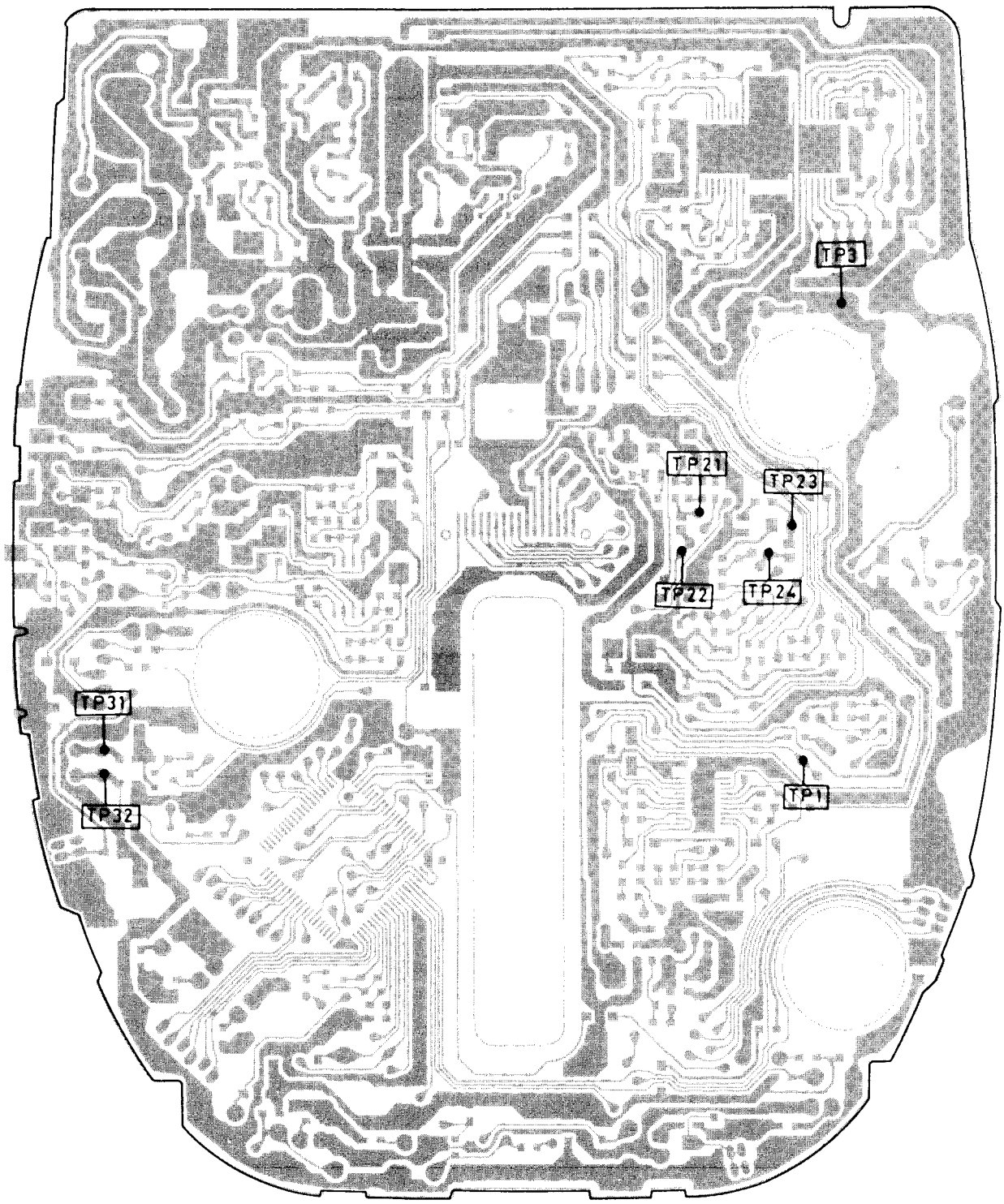
Equipment Required

- Output Meter (SSVM)
- Oscilloscope
- The Regular Disc (PHILIPS SBC444)
- Test Disc (PHILIPS SBC444A)
  (JVC CTS-1000)

Pre-Adjustment Procedures

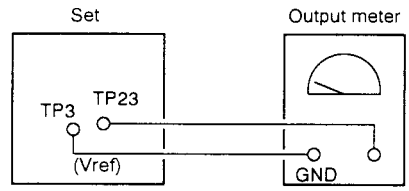
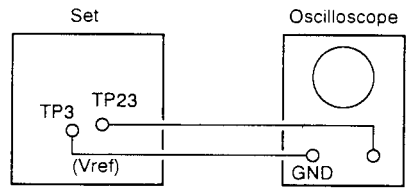
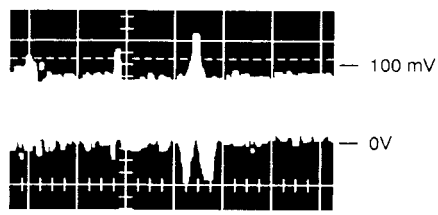
- Connect TP31 and TP32. (Door switch)
- Connect TP21 and TP22. (TE short land)
- Connect TP23 and TP24. (FE short land)

■ CD Amplifier P.C. Board Adjustment Point

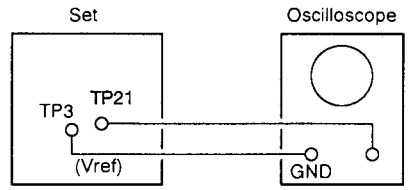
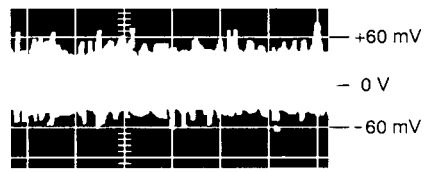
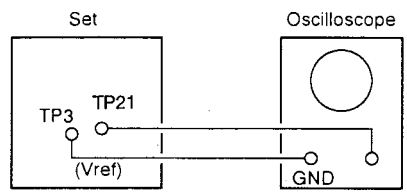
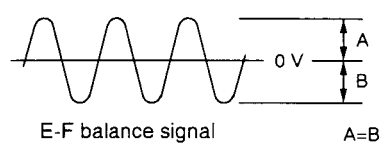


Bottom View **Fig. 3-1**

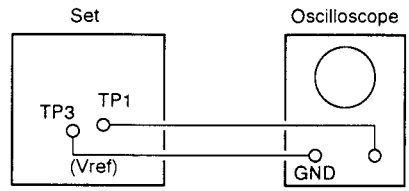
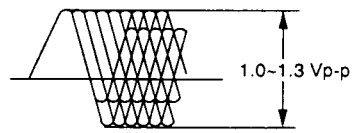
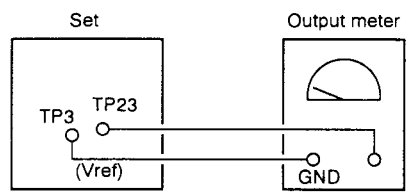
■ Focus servo adjustment (Refer to Fig. 1, 2 and Fig. 3-1.)

Item	Condition	Adjustment and Confirmation method	Standard value	Adjust.
Focus offset adjustment	• Power SW: ON • Stop mode • Output meter (see Fig. 1)	Connect the set as shown in Fig. 1. Adjust VR1 so that the output meter reads 0 V ± 20 mV DC.  **Fig. 1**	0 ± 20 mV DC	VR1
Focus gain adjustment	• Regular disc • Oscilloscope (see Fig. 2)	Connect the set as shown in Fig. 2. While playing a regular disc, adjust VR4 to so that the focus error signal level becomes 100 mV p-p approx.  **Fig. 2**  	100 mVp-p approx.	VR4

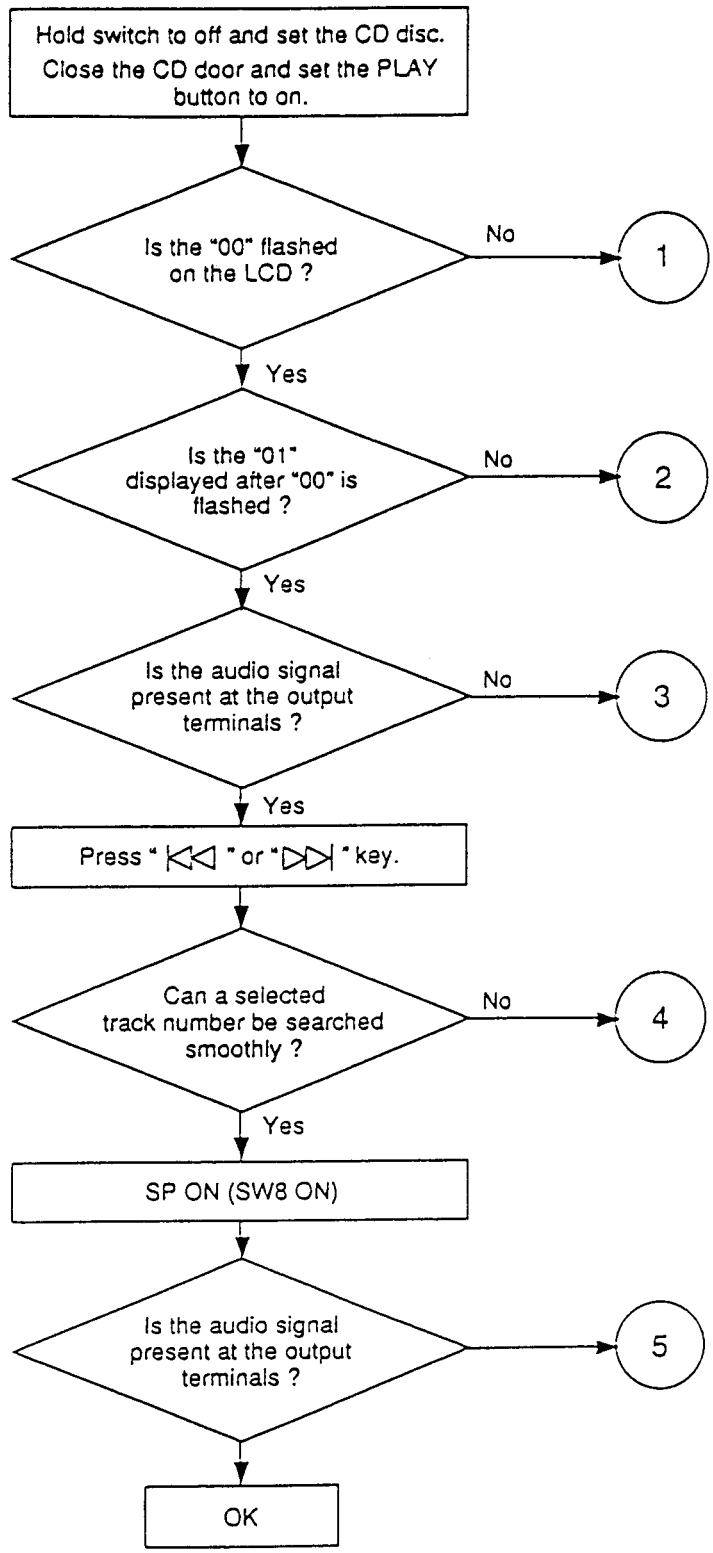
■ Tracking servo adjustment (Refer to Fig. 3, 4 and Fig. 3-1.)

Item	Condition	Adjustment and Confirmation method	Standard value	Adjust.
Tracking gain adjustment	• Regular disc • Oscilloscope (see Fig. 3)	1) Connect the set as shown in Fig. 3. While playing a regular disc, adjust VR3 so that the gain of tracking drive signal becomes 120 mVp-p.  **Fig. 3**  2) Swap the regular disc for the test disc SBC444A and play it at the black dot of 600 µm. Confirm that there is no skipping. 3) If there is any skipping, adjust VR3 to reduce the tracking servo gain until no skipping occurs.	120 mVp-p	VR3
Tracking E-F balance adjustment	• Regular disc • Oscilloscope (see Fig. 4)	Connect the set as shown in Fig. 4. 1) Play the regular disc. 2) While pushing the SKIP SEARCH button, adjust VR2 so that the E-F balance signal waveform becomes as shown in the figure below.  **Fig. 4**  E-F balance signal A=B		VR2

■ Final adjustment (Refer to Fig. 5, 6 and Fig. 3-1.)

Item	Condition	Adjustment and Confirmation method	Standard value	Adjust.
Eye-pattern RF waveform adjustment	• Regular disc • Oscilloscope (see Fig. 5)	Connect the set as shown in Fig. 5. While playing a regulart disc, adjust VR1 to make the Eye-pattern RF waveform maximum and clear.  **Fig. 5** 	1.0 – 1.3 Vp-p	VR1
FE DC level adjustment	• Stop mode • Output meter (see Fig. 6)	Connect the set as shown in Fig. 6. Check the FE DC level in the Stop mode. If FE DC level is higher than +260 mV, adjust it to be +210 V ± 50 mV DC with VR4. If FE DC level is lower than –250 mV, adjust it to be –210 V ± 50 mV DC with VR4.  **Fig. 6**	+210 mV ± 50 mV DC –210 mV ± 50 mV DC	VR4

4 Troubleshooting


Hold switch to off and set the CD disc.
Close the CD door and set the PLAY button to on.
Is the "00" flashed on the LCD ?
No
1
Yes
Is the "01" displayed after "00" is flashed ?
No
2
Yes
Is the audio signal present at the output terminals ?
No
3
Yes
Press " |◁◁ " or " ▷▷| " key.
Can a selected track number be searched smoothly ?
No
4
Yes
SP ON (SW8 ON)
Is the audio signal present at the output terminals ?
5
OK

Repair Item 1: At power on, "00" is not displayed.

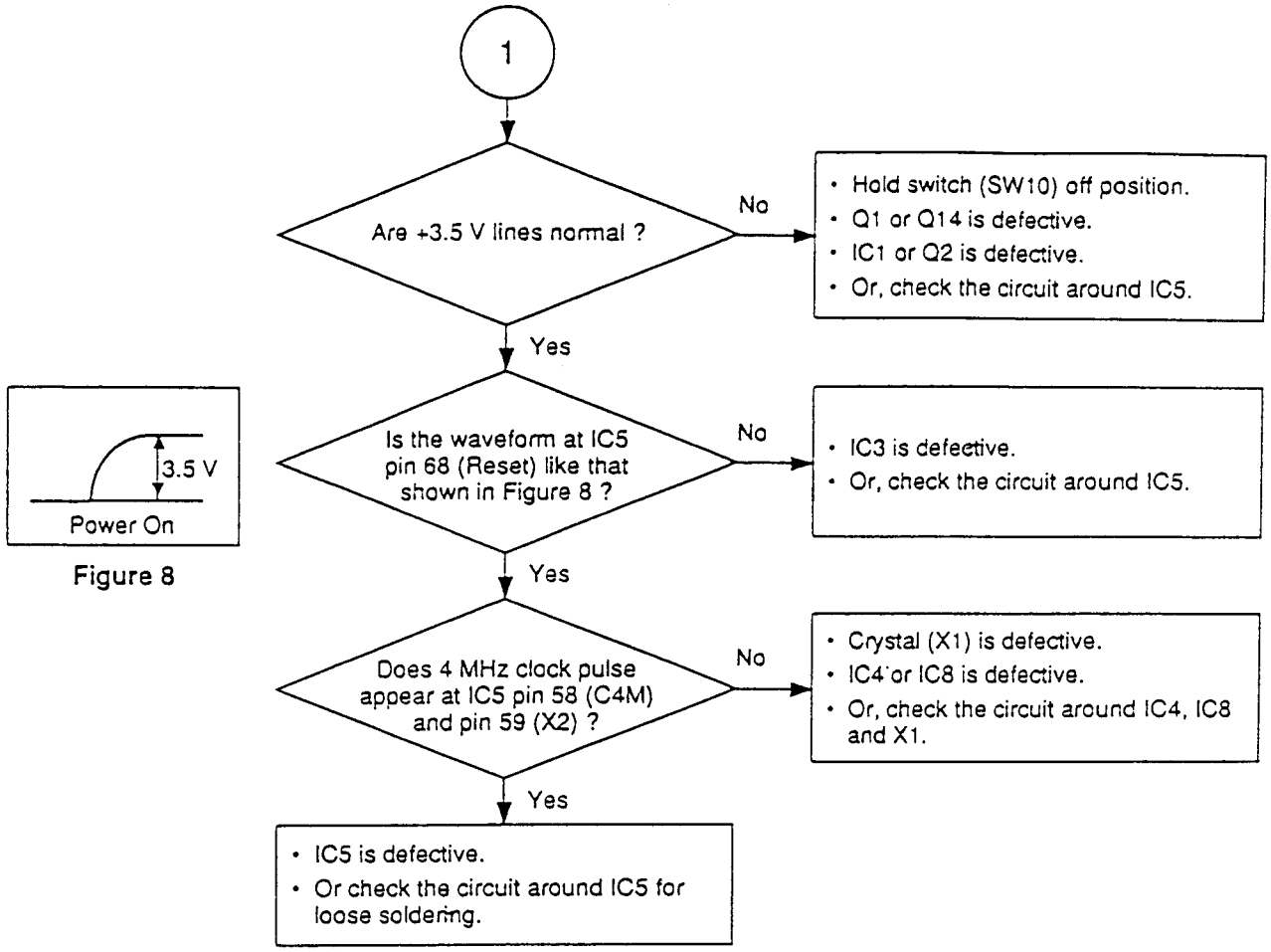
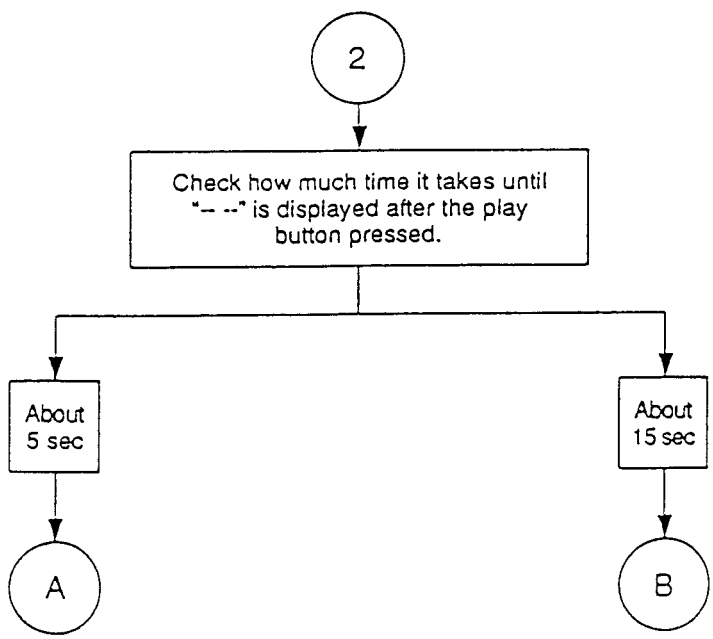

1
Are +3.5 V lines normal ?
No
• Hold switch (SW10) off position.
• Q1 or Q14 is defective.
• IC1 or Q2 is defective.
• Or, check the circuit around IC5.
Yes
Is the waveform at IC5 pin 68 (Reset) like that shown in Figure 8 ?
No
• IC3 is defective.
• Or, check the circuit around IC5.
Yes
Does 4 MHz clock pulse appear at IC5 pin 58 (C4M) and pin 59 (X2) ?
No
• Crystal (X1) is defective.
• IC4 or IC8 is defective.
• Or, check the circuit around IC4, IC8 and X1.
Yes
• IC5 is defective.
• Or check the circuit around IC5 for loose soldering.
3.5 V
Power On

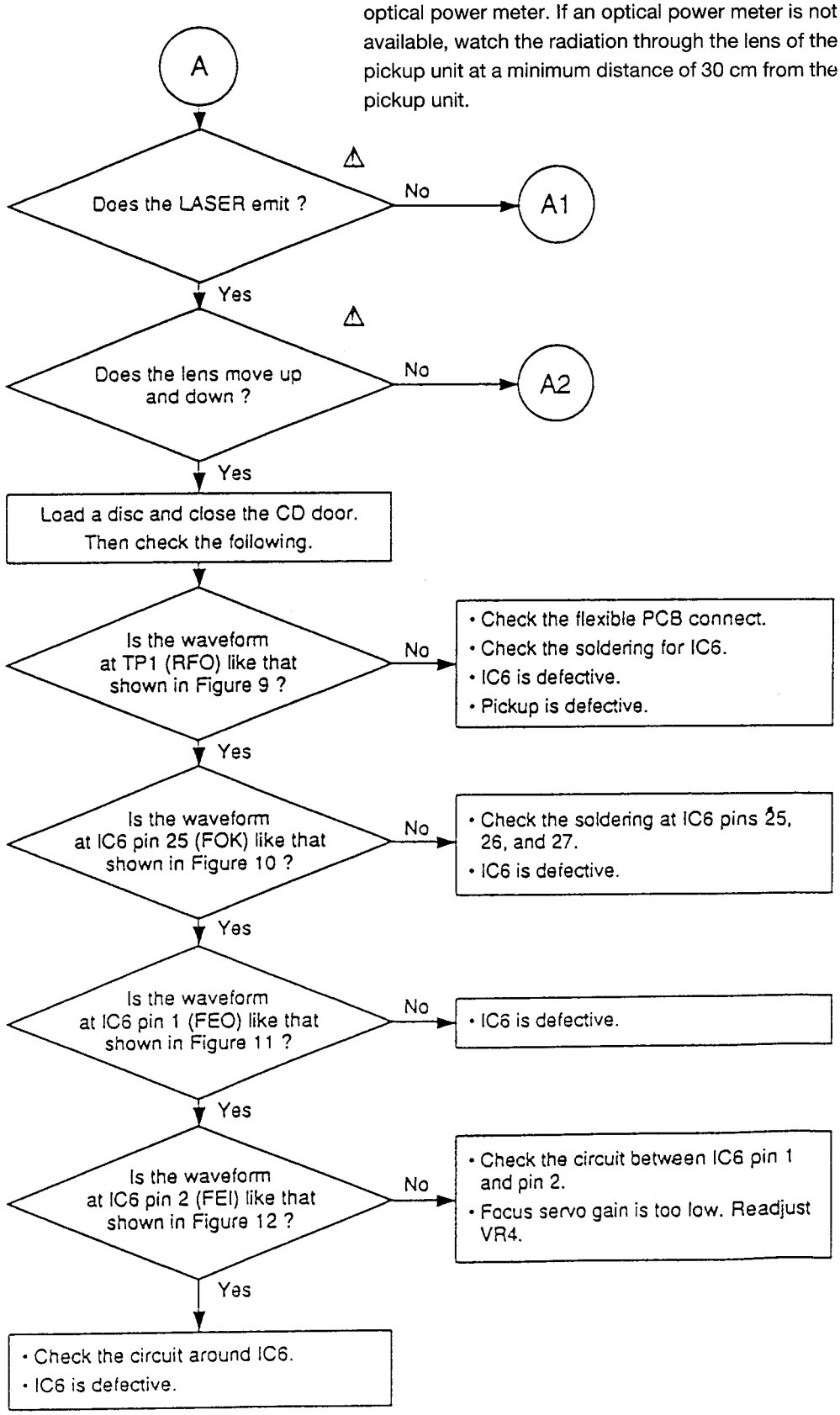
Figure 8

Repair Item 2: "-- --" is displayed instead of total track number and play time after "00" is displayed.



Repair Item 2-A

⚠ **Note:** Connect TP31 to TP32 (Refer to Fig. 3-1 on Page 15) by removing the top cabinet. Then open the top cover and check the radiation power with an optical power meter. If an optical power meter is not available, watch the radiation through the lens of the pickup unit at a minimum distance of 30 cm from the pickup unit.


A
⚠
Does the LASER emit ?
No
A1
Yes
⚠
Does the lens move up and down ?
No
A2
Yes
Load a disc and close the CD door. Then check the following.
Is the waveform at TP1 (RFO) like that shown in Figure 9 ?
No
• Check the flexible PCB connect.
• Check the soldering for IC6.
• IC6 is defective.
• Pickup is defective.
Yes
Is the waveform at IC6 pin 25 (FOK) like that shown in Figure 10 ?
No
• Check the soldering at IC6 pins 25, 26, and 27.
• IC6 is defective.
Yes
Is the waveform at IC6 pin 1 (FEO) like that shown in Figure 11 ?
No
• IC6 is defective.
Yes
Is the waveform at IC6 pin 2 (FEI) like that shown in Figure 12 ?
No
• Check the circuit between IC6 pin 1 and pin 2.
• Focus servo gain is too low. Readjust VR4.
Yes
• Check the circuit around IC6.
• IC6 is defective.

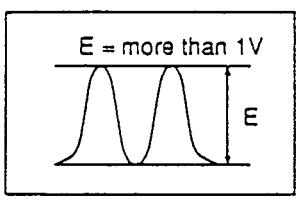


Figure 9

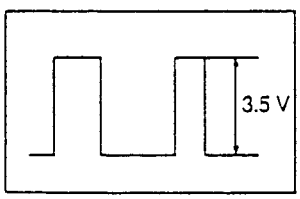


Figure 10

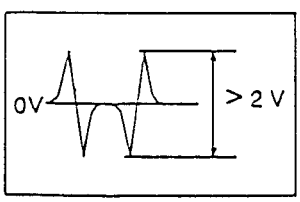


Figure 11

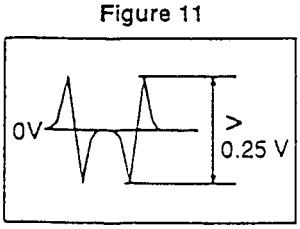
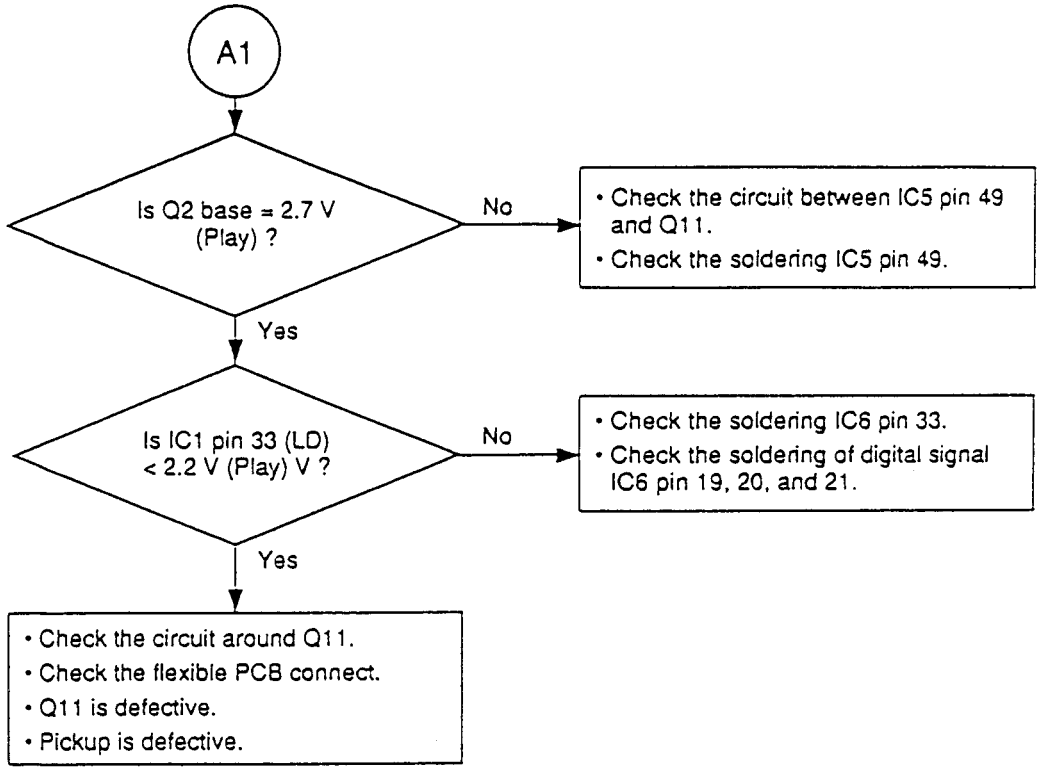


Figure 12

Repair Item 2-A1: Laser does not emit.


A1
Is Q2 base = 2.7 V (Play) ?
No
• Check the circuit between IC5 pin 49 and Q11.
• Check the soldering IC5 pin 49.
Yes
Is IC1 pin 33 (LD) < 2.2 V (Play) V ?
No
• Check the soldering IC6 pin 33.
• Check the soldering of digital signal IC6 pin 19, 20, and 21.
Yes
• Check the circuit around Q11.
• Check the flexible PCB connect.
• Q11 is defective.
• Pickup is defective.

Repair Item 2-A2: Object lens of pickup unit does not move up and down.

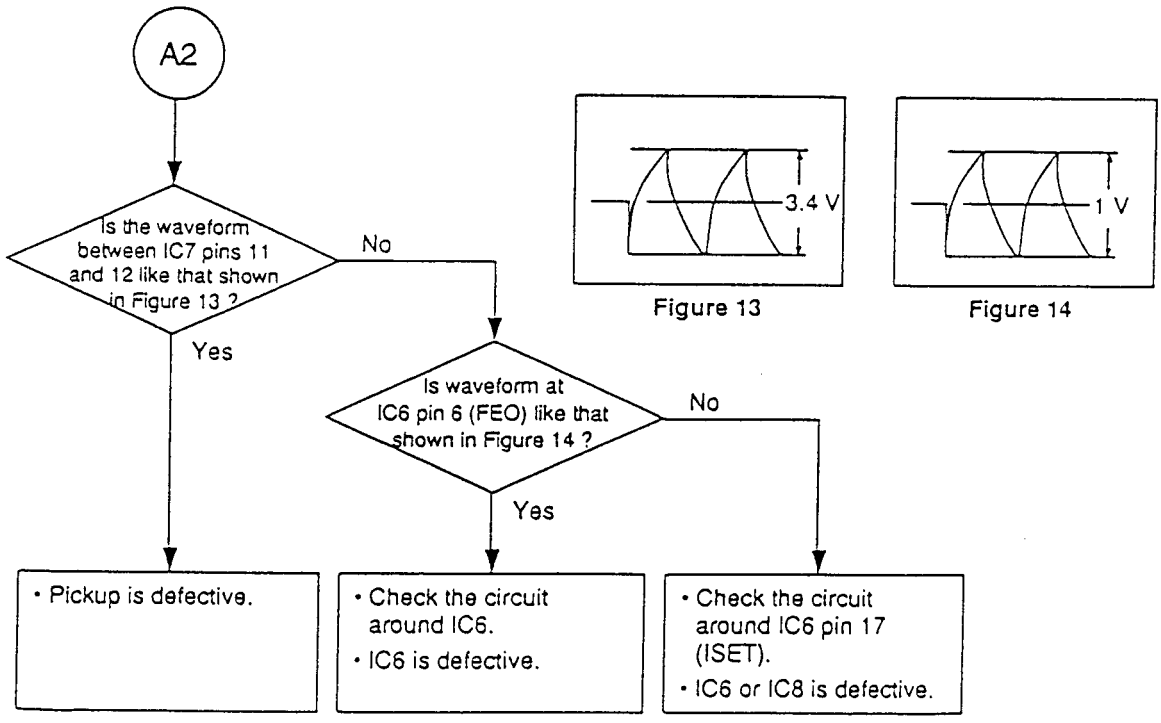

A2
Is the waveform between IC7 pins 11 and 12 like that shown in Figure 13 ?
No
Yes
Is waveform at IC6 pin 6 (FEO) like that shown in Figure 14 ?
No
Yes
• Pickup is defective.
• Check the circuit around IC6.
• IC6 is defective.
• Check the circuit around IC6 pin 17 (ISET).
• IC6 or IC8 is defective.

Figure 13

Figure 14

Repair Item 2-B

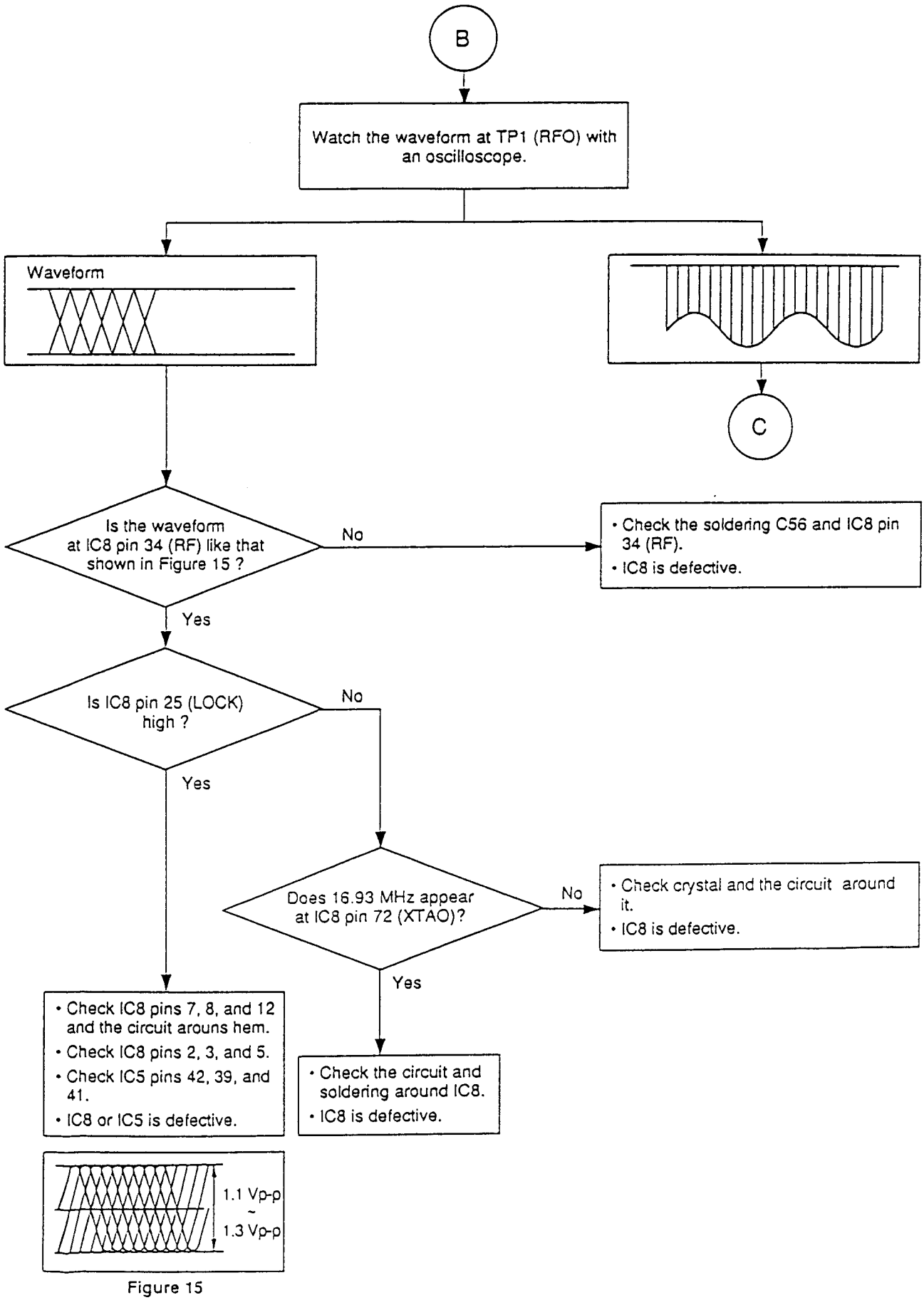
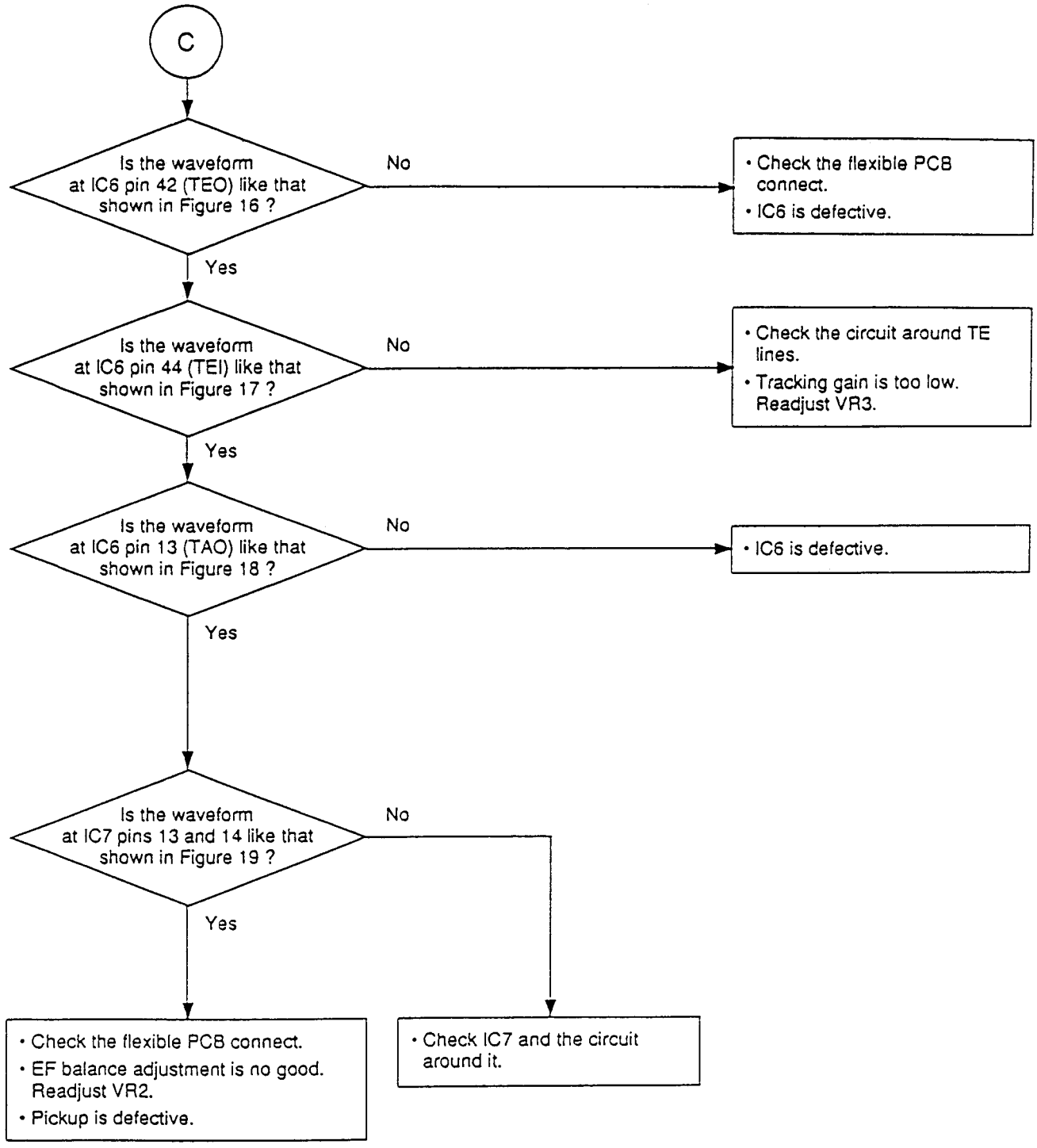

B
Watch the waveform at TP1 (RFO) with an oscilloscope.
Waveform
C
Is the waveform at IC8 pin 34 (RF) like that shown in Figure 15 ?
No
• Check the soldering C56 and IC8 pin 34 (RF).
• IC8 is defective.
Yes
Is IC8 pin 25 (LOCK) high ?
No
Yes
Does 16.93 MHz appear at IC8 pin 72 (XTAO)?
No
• Check crystal and the circuit around it.
• IC8 is defective.
Yes
• Check IC8 pins 7, 8, and 12 and the circuit arouns hem.
• Check IC8 pins 2, 3, and 5.
• Check IC5 pins 42, 39, and 41.
• IC8 or IC5 is defective.
• Check the circuit and soldering around IC8.
• IC8 is defective.
1.1 Vp-p
~
1.3 Vp-p

Figure 15


C
Is the waveform at IC6 pin 42 (TEO) like that shown in Figure 16 ?
No
• Check the flexible PCB connect.
• IC6 is defective.
Yes
Is the waveform at IC6 pin 44 (TEI) like that shown in Figure 17 ?
No
• Check the circuit around TE lines.
• Tracking gain is too low. Readjust VR3.
Yes
Is the waveform at IC6 pin 13 (TAO) like that shown in Figure 18 ?
No
• IC6 is defective.
Yes
Is the waveform at IC7 pins 13 and 14 like that shown in Figure 19 ?
No
Yes
• Check the flexible PCB connect.
• EF balance adjustment is no good. Readjust VR2.
• Pickup is defective.
• Check IC7 and the circuit around it.

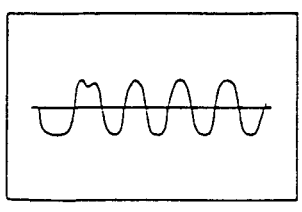


Figure 16

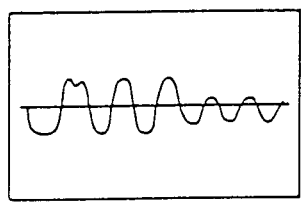


Figure 17

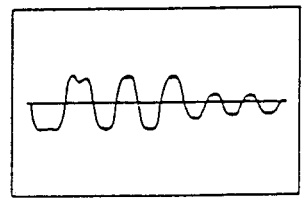


Figure 18

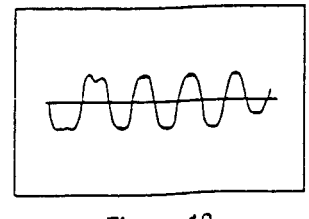
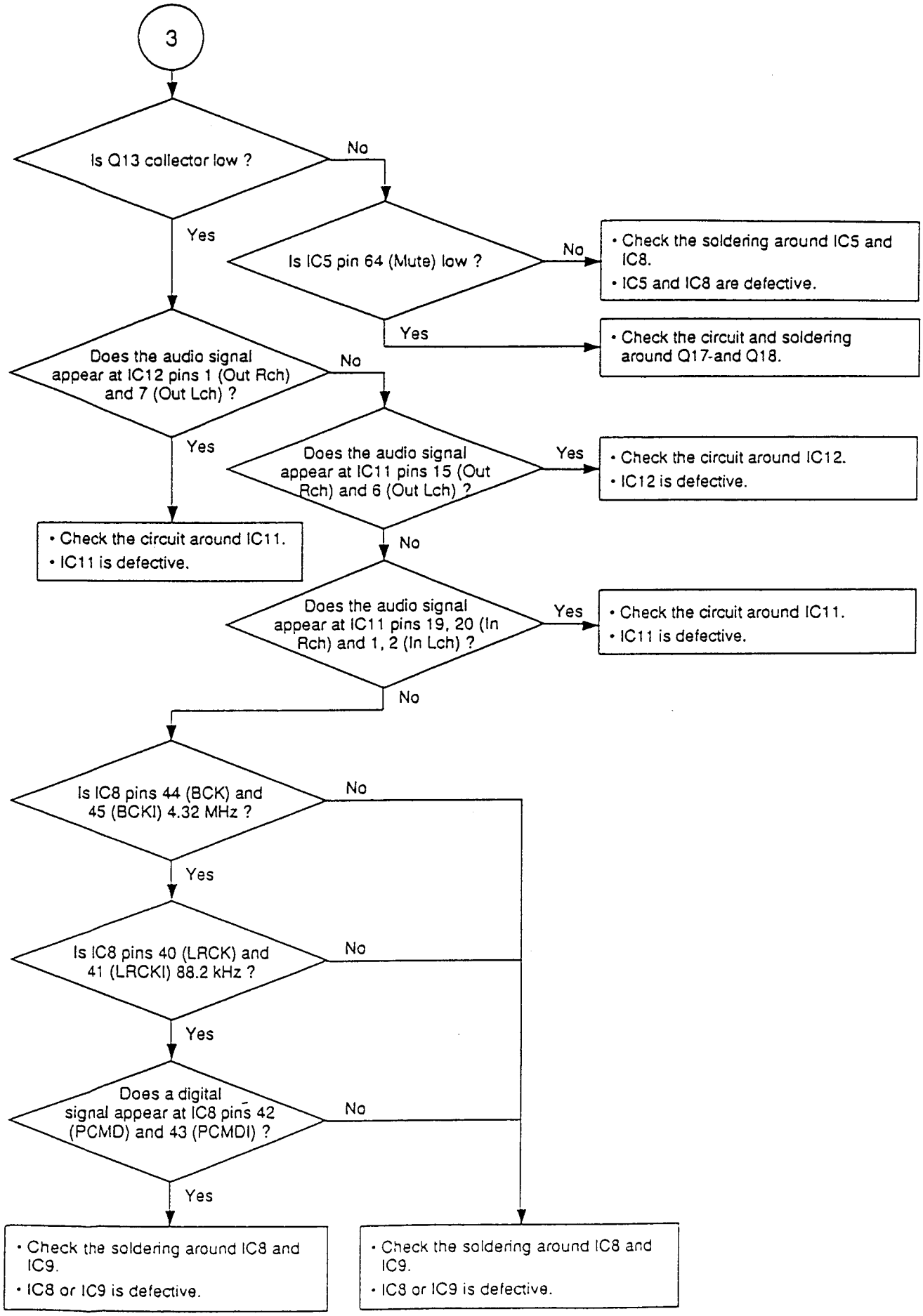


Figure 19

Repair Item 3: No sound signal.


3
Is Q13 collector low ?
No
Yes
Is IC5 pin 64 (Mute) low ?
No
• Check the soldering around IC5 and IC8.
• IC5 and IC8 are defective.
Yes
• Check the circuit and soldering around Q17-and Q18.
Does the audio signal appear at IC12 pins 1 (Out Rch) and 7 (Out Lch) ?
No
Yes
Does the audio signal appear at IC11 pins 15 (Out Rch) and 6 (Out Lch) ?
Yes
• Check the circuit around IC12.
• IC12 is defective.
• Check the circuit around IC11.
• IC11 is defective.
No
Does the audio signal appear at IC11 pins 19, 20 (In Rch) and 1, 2 (In Lch) ?
Yes
• Check the circuit around IC11.
• IC11 is defective.
No
Is IC8 pins 44 (BCK) and 45 (BCKI) 4.32 MHz ?
No
Yes
Is IC8 pins 40 (LRCK) and 41 (LRCKI) 88.2 kHz ?
No
Yes
Does a digital signal appear at IC8 pins 42 (PCMD) and 43 (PCMDI) ?
No
Yes
• Check the soldering around IC8 and IC9.
• IC8 or IC9 is defective.
• Check the soldering around IC8 and IC9.
• IC8 or IC9 is defective.

Repair Item 4: Selected track number cannot be searched.

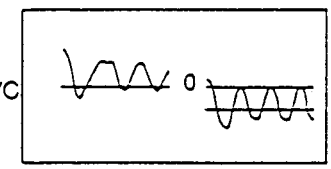


Figure 20

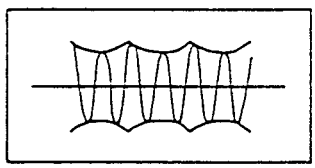


Figure 21

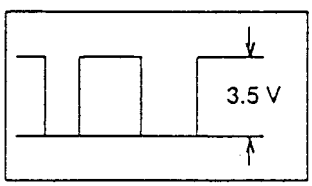
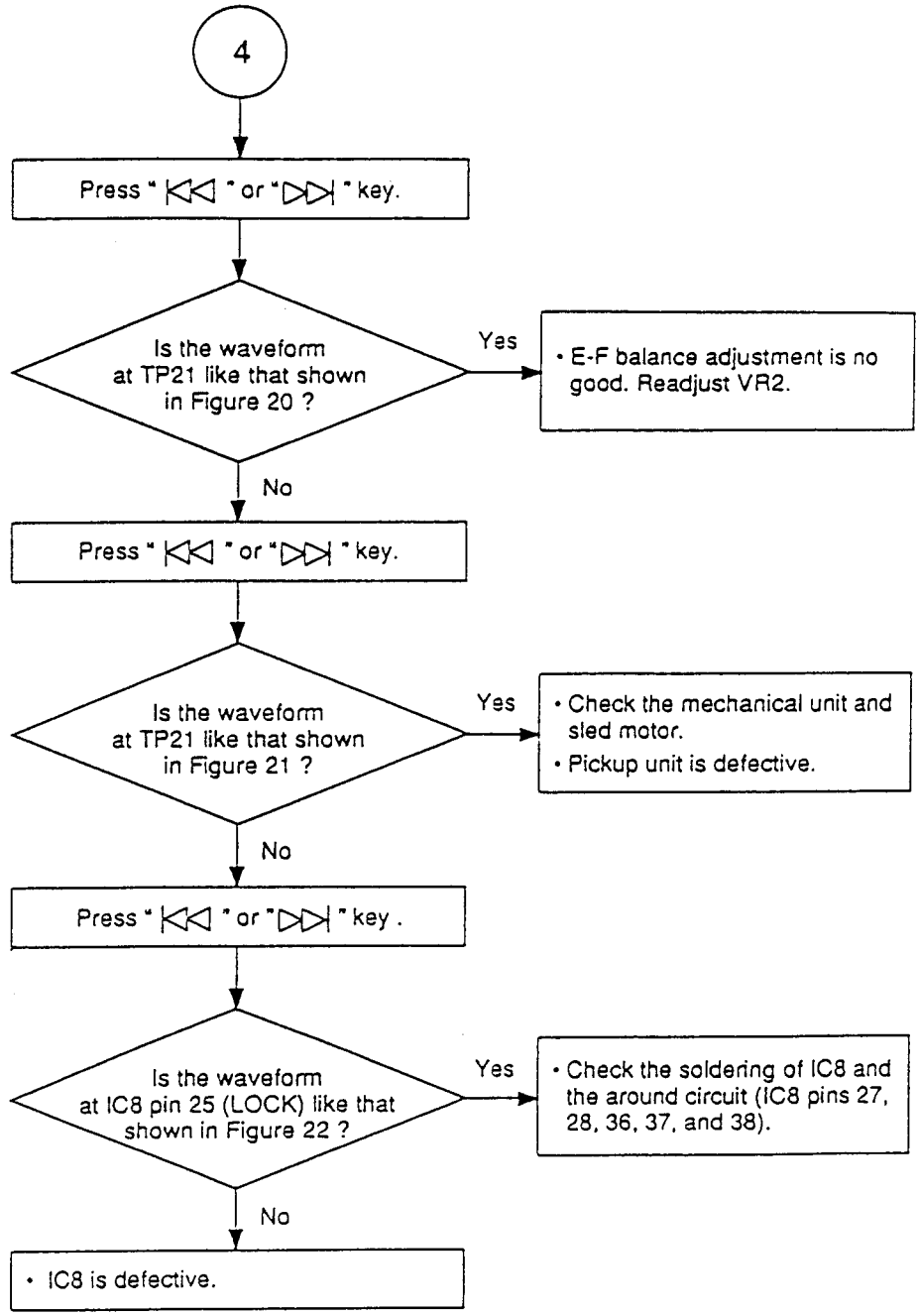
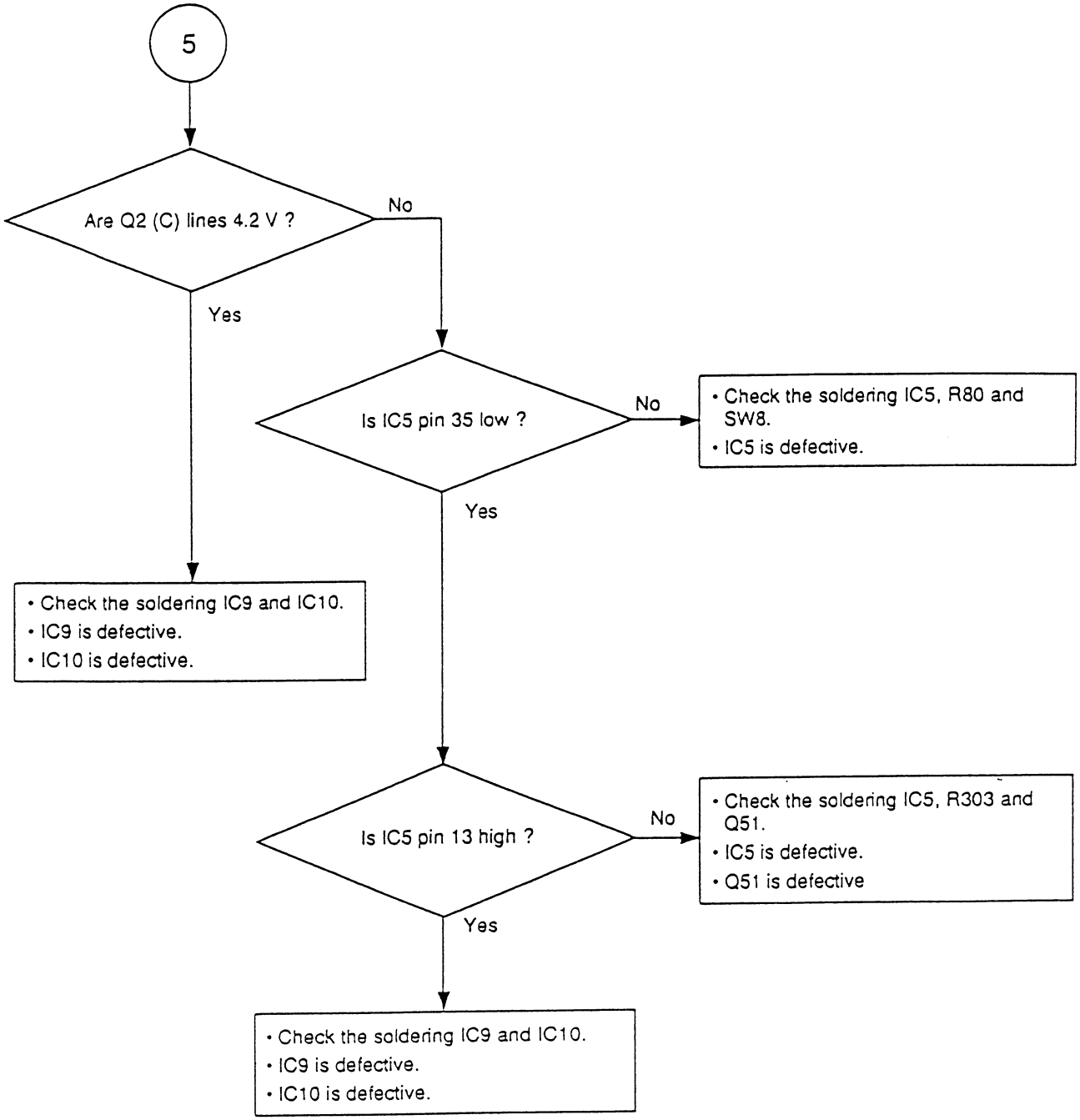


Figure 22


4
Press " ⏮ " or " ⏭ " key.
Is the waveform at TP21 like that shown in Figure 20 ?
Yes
• E-F balance adjustment is no good. Readjust VR2.
No
Press " ⏮ " or " ⏭ " key.
Is the waveform at TP21 like that shown in Figure 21 ?
Yes
• Check the mechanical unit and sled motor.
• Pickup unit is defective.
No
Press " ⏮ " or " ⏭ " key .
Is the waveform at IC8 pin 25 (LOCK) like that shown in Figure 22 ?
Yes
• Check the soldering of IC8 and the around circuit (IC8 pins 27, 28, 36, 37, and 38).
No
• IC8 is defective.

* VC is the reference voltage of the servo circuit (IC6 pin 48).

Repair Item 5: No sound signal.


5
Are Q2 (C) lines 4.2 V ?
No
Yes
Is IC5 pin 35 low ?
No
• Check the soldering IC5, R80 and SW8.
• IC5 is defective.
Yes
• Check the soldering IC9 and IC10.
• IC9 is defective.
• IC10 is defective.
Is IC5 pin 13 high ?
No
• Check the soldering IC5, R303 and Q51.
• IC5 is defective.
• Q51 is defective
Yes
• Check the soldering IC9 and IC10.
• IC9 is defective.
• IC10 is defective.

5 Wiring Connections

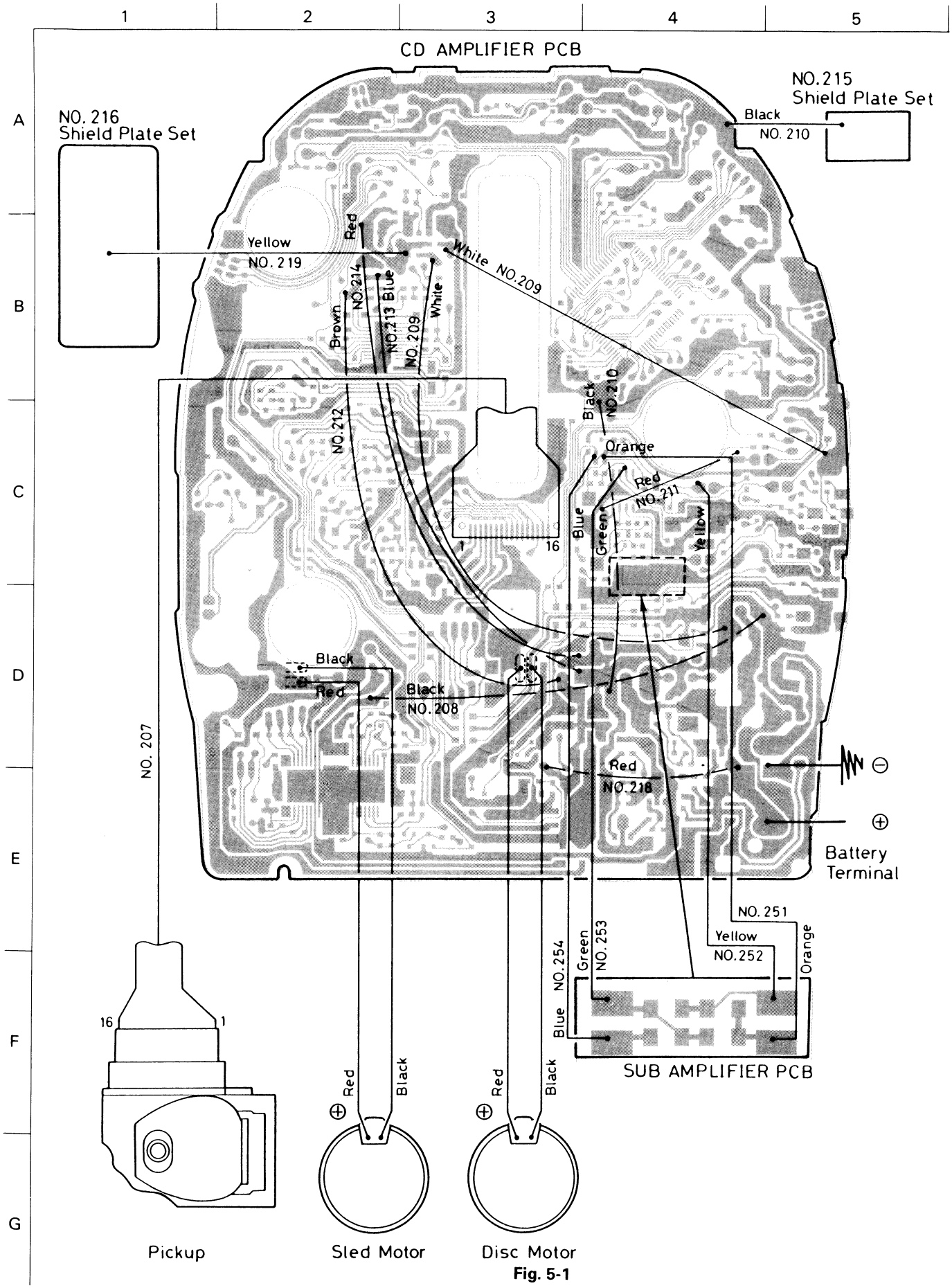
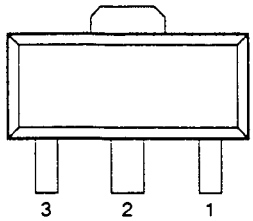


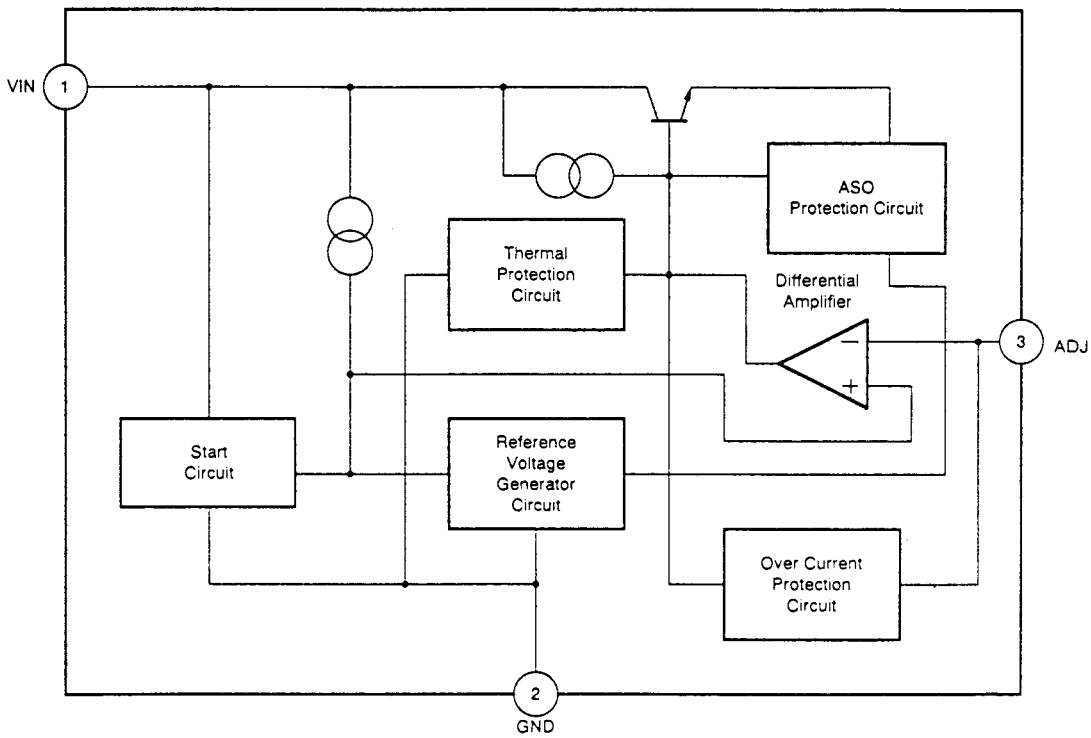
Fig. 5-1

6 Block Diagram

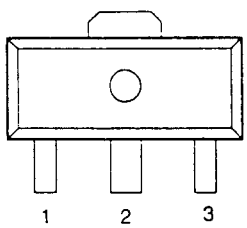
■ Integrated Circuit Diagram

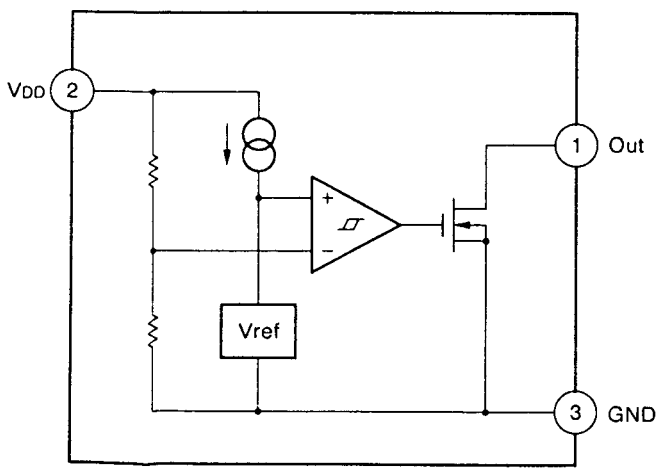
IC1: M5237ML



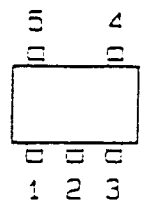


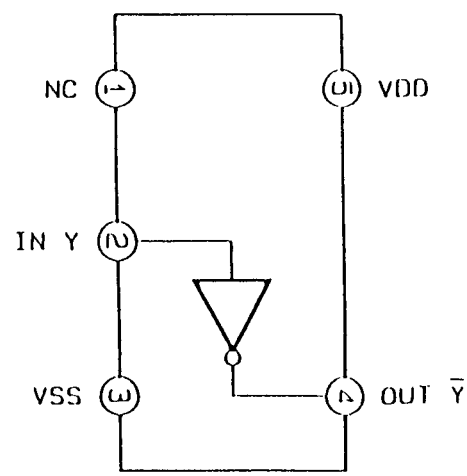
IC3: RH5VL31AA



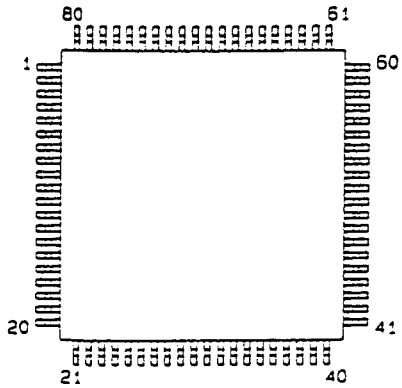


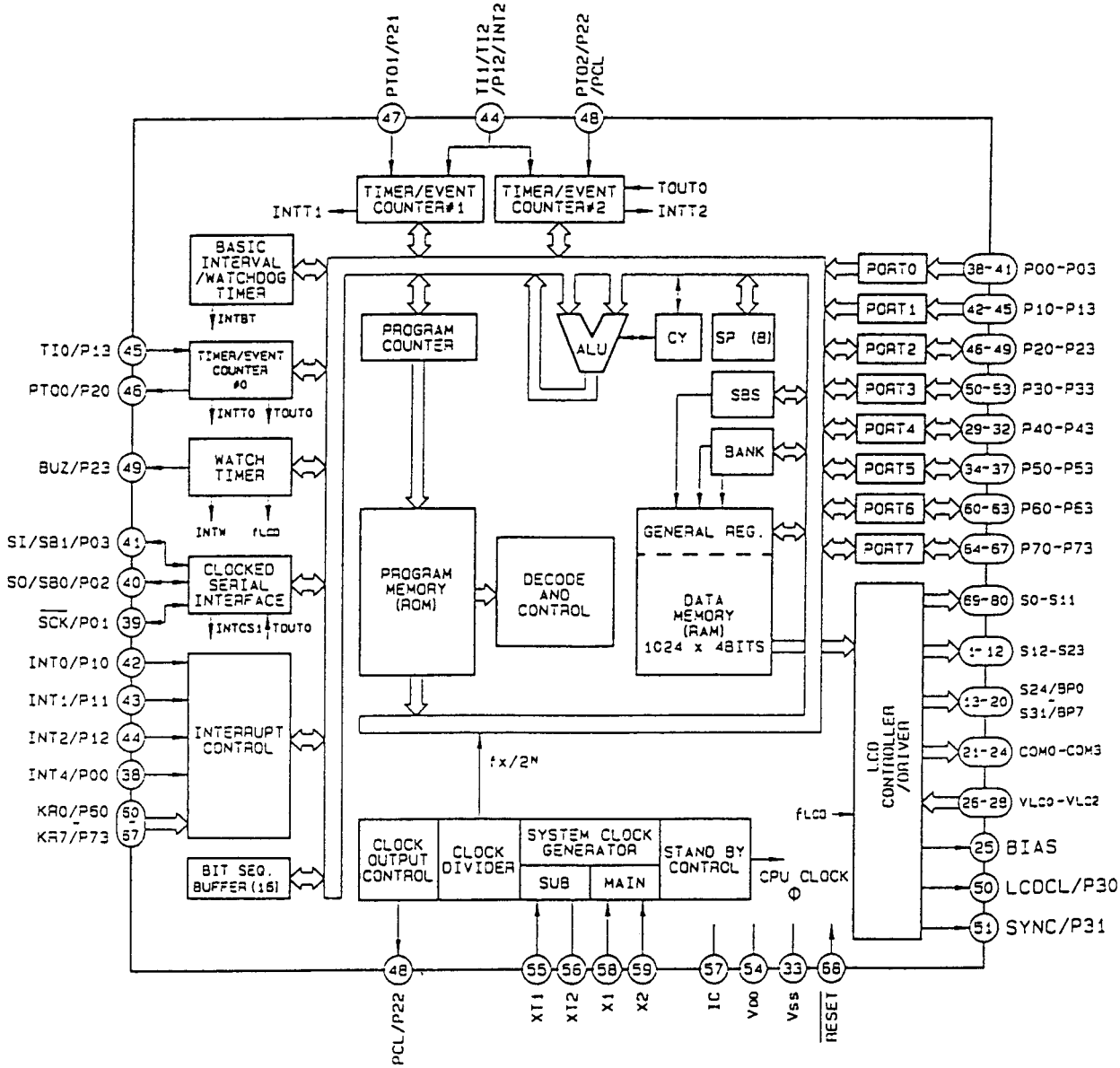
IC4: TC7S04F



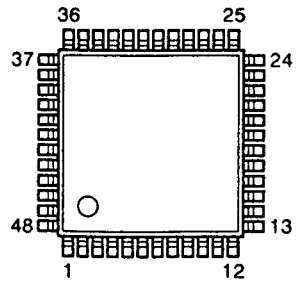


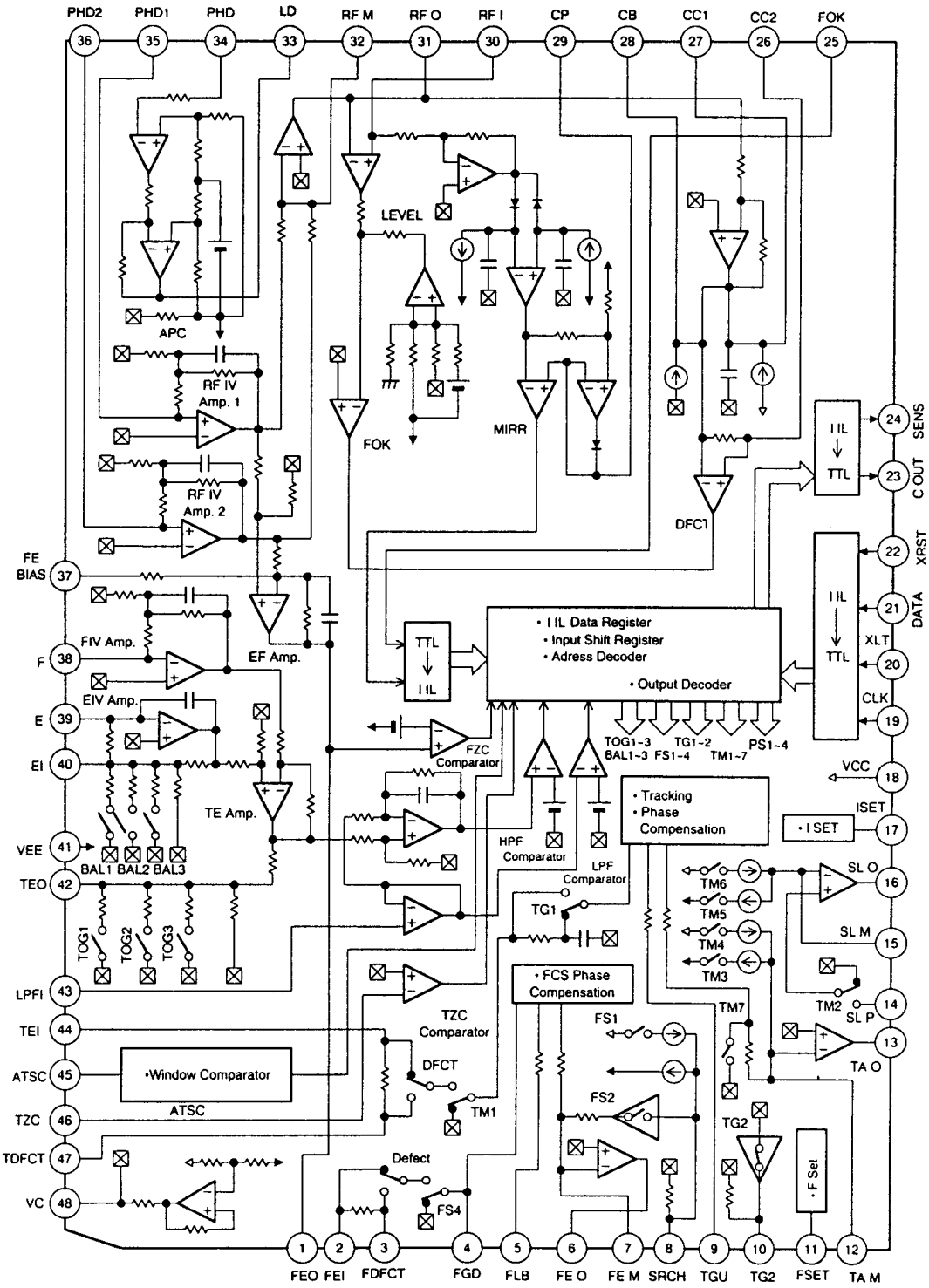
IC5: UPD753012GC-E17-3B9



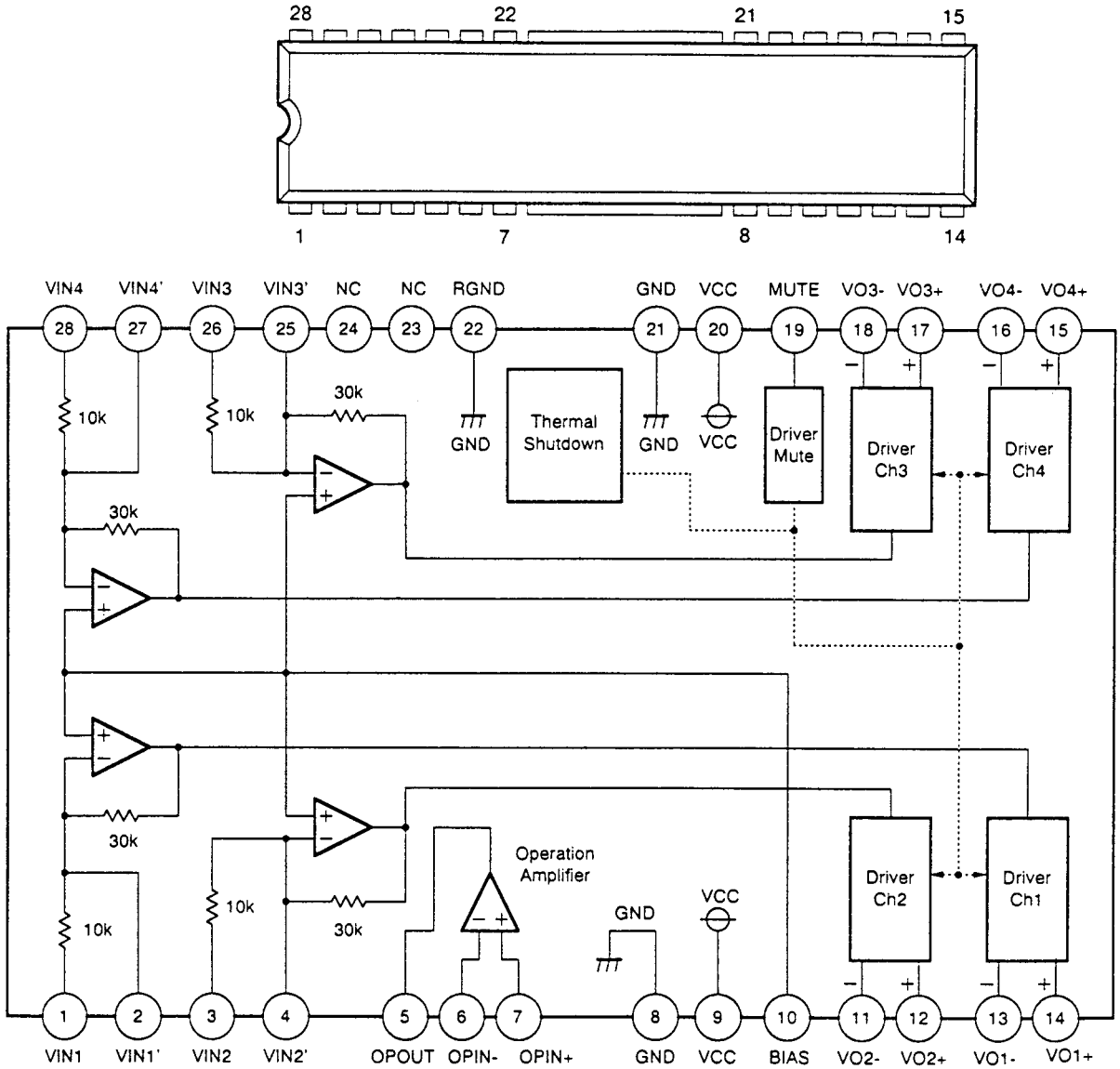


IC6: CXA1782BR

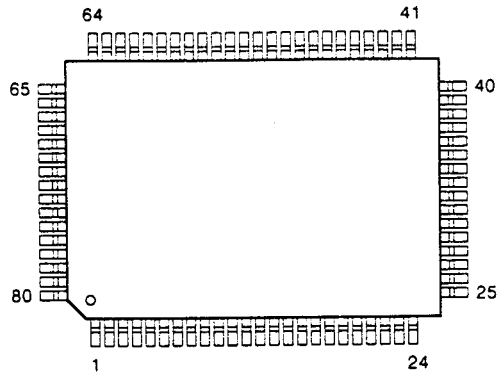


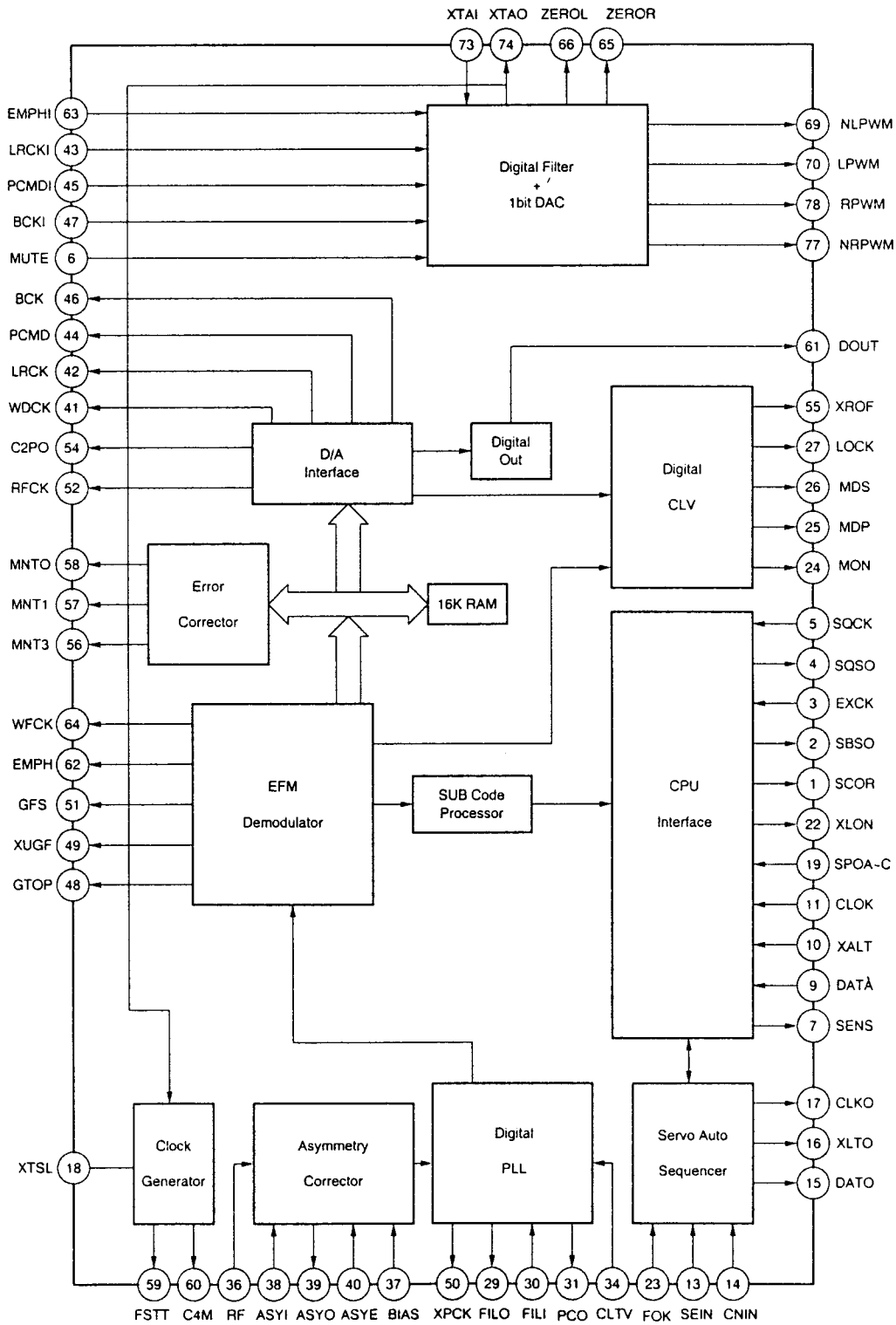


IC7: BA6394FP

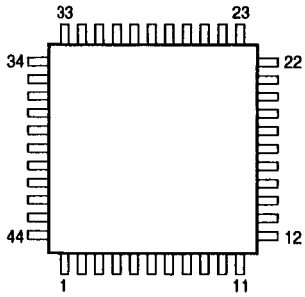


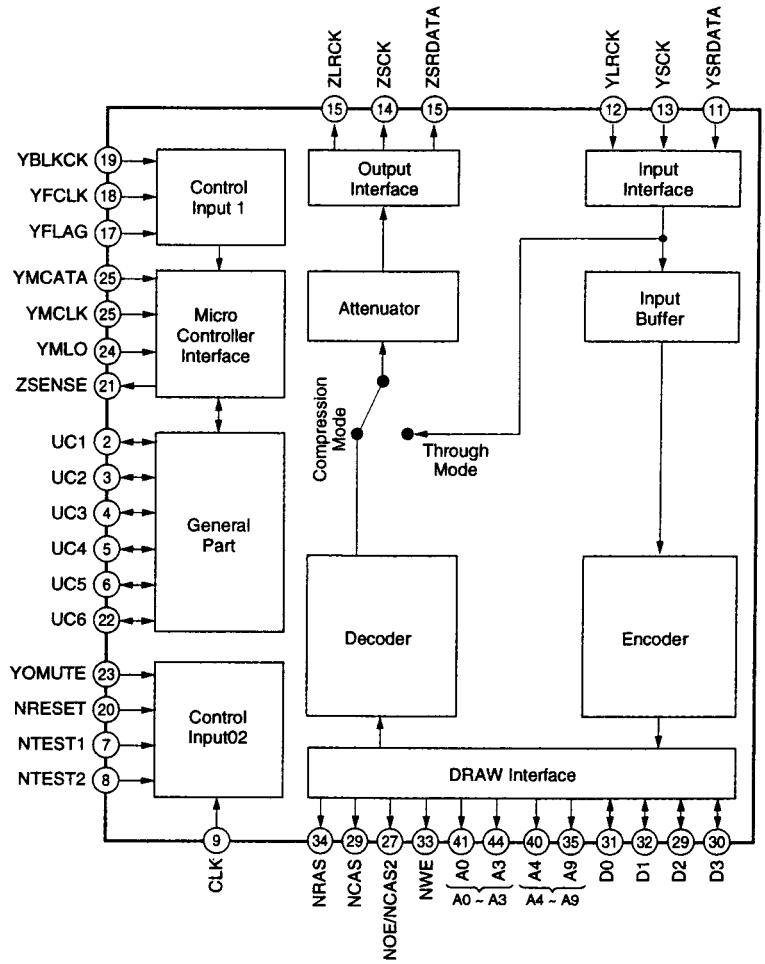
IC8: CXD2508AR



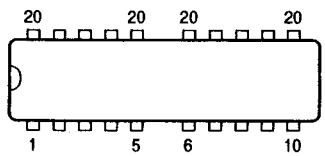


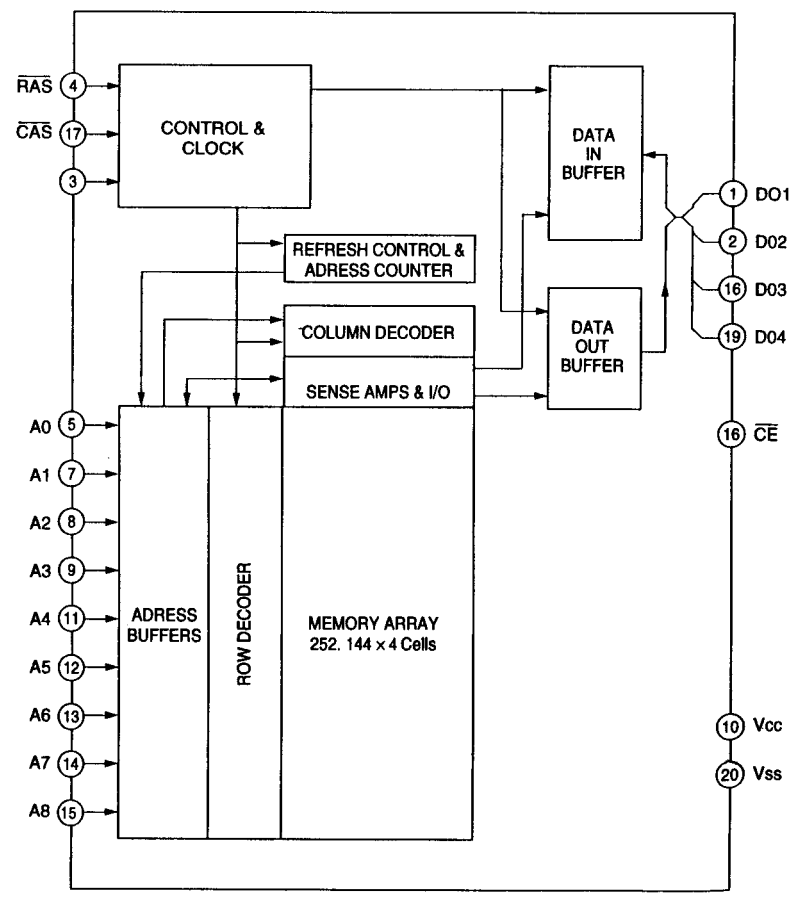
IC9: SM5856A1F



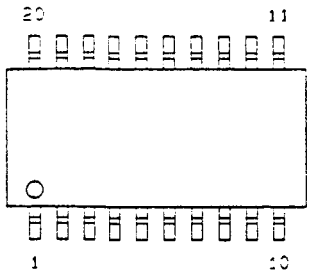


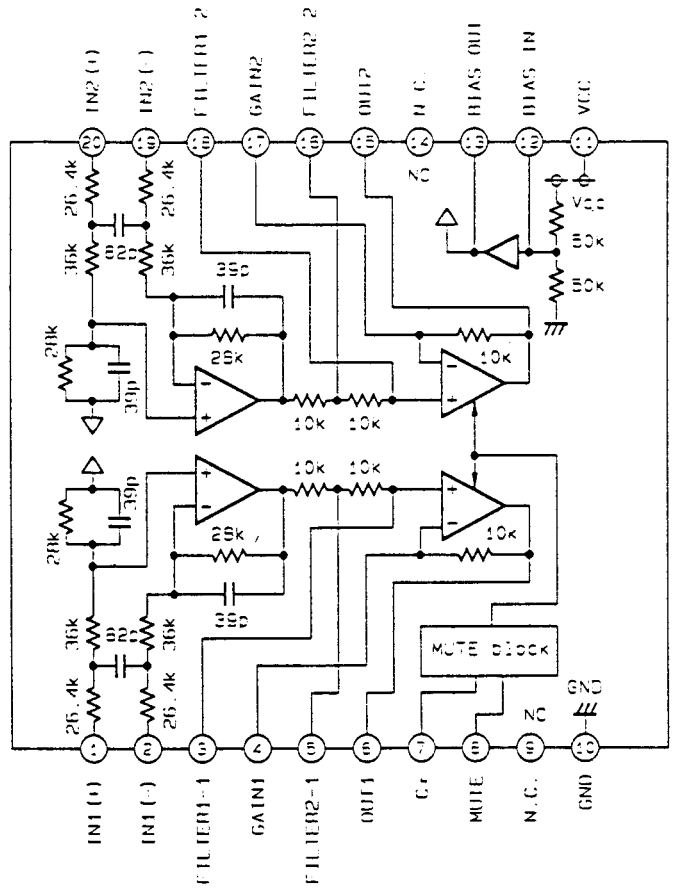
IC10: LH64256BK-80



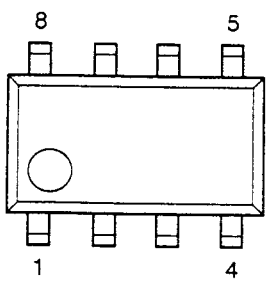


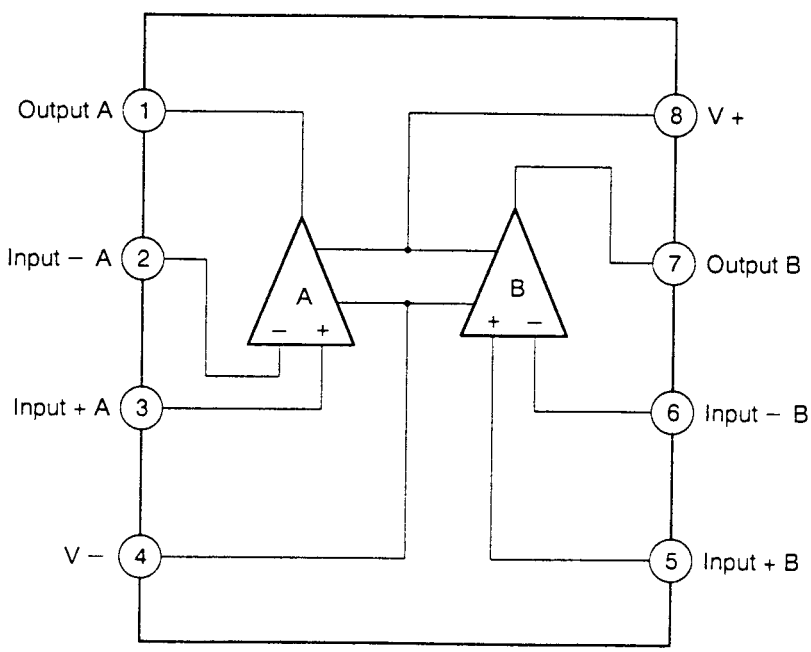
IC11: BH3563FV





IC12: NJM3414AM





■ Circuit Diagram for XL-P42

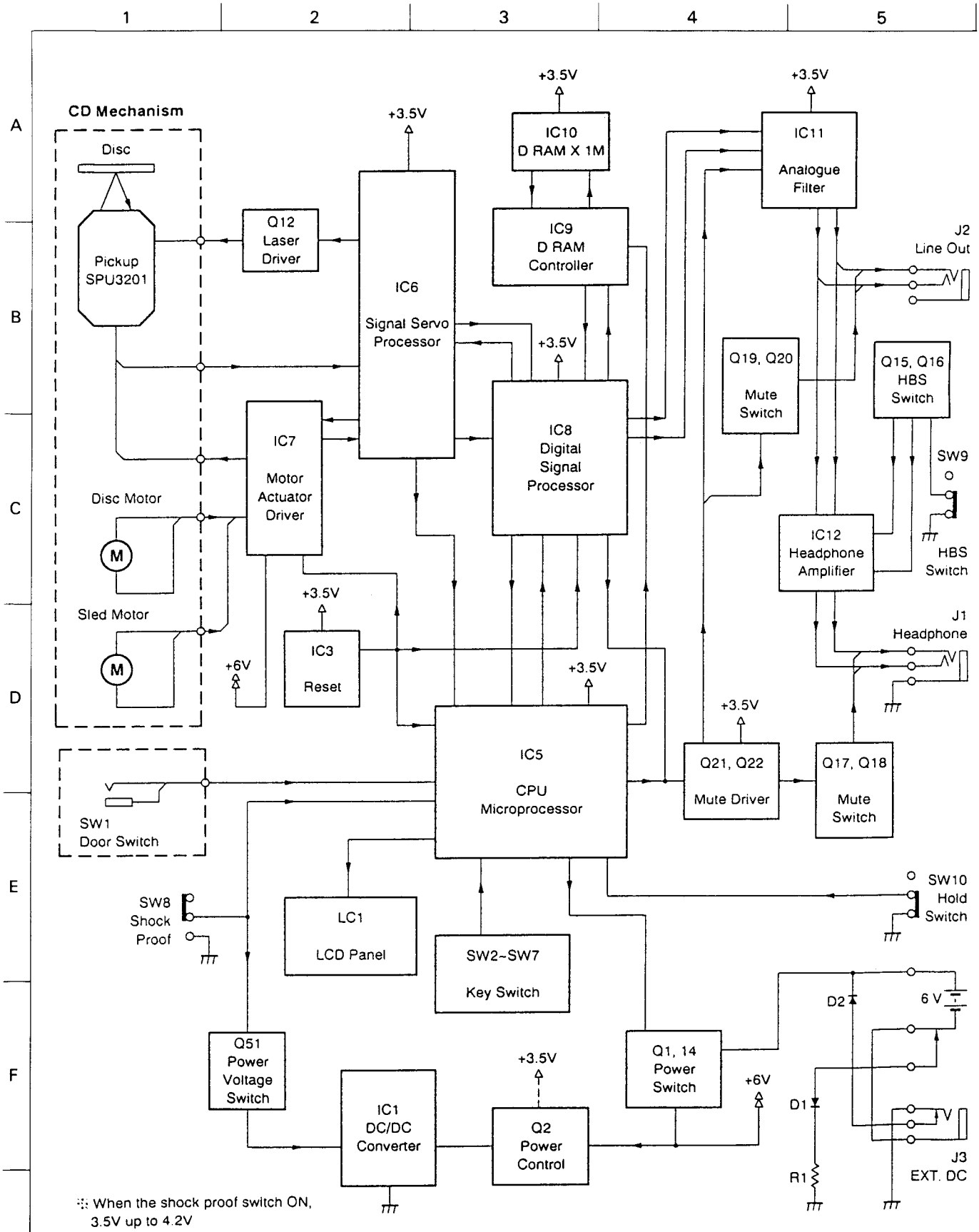


Fig. 6-1

7 Standard Circuit Diagram

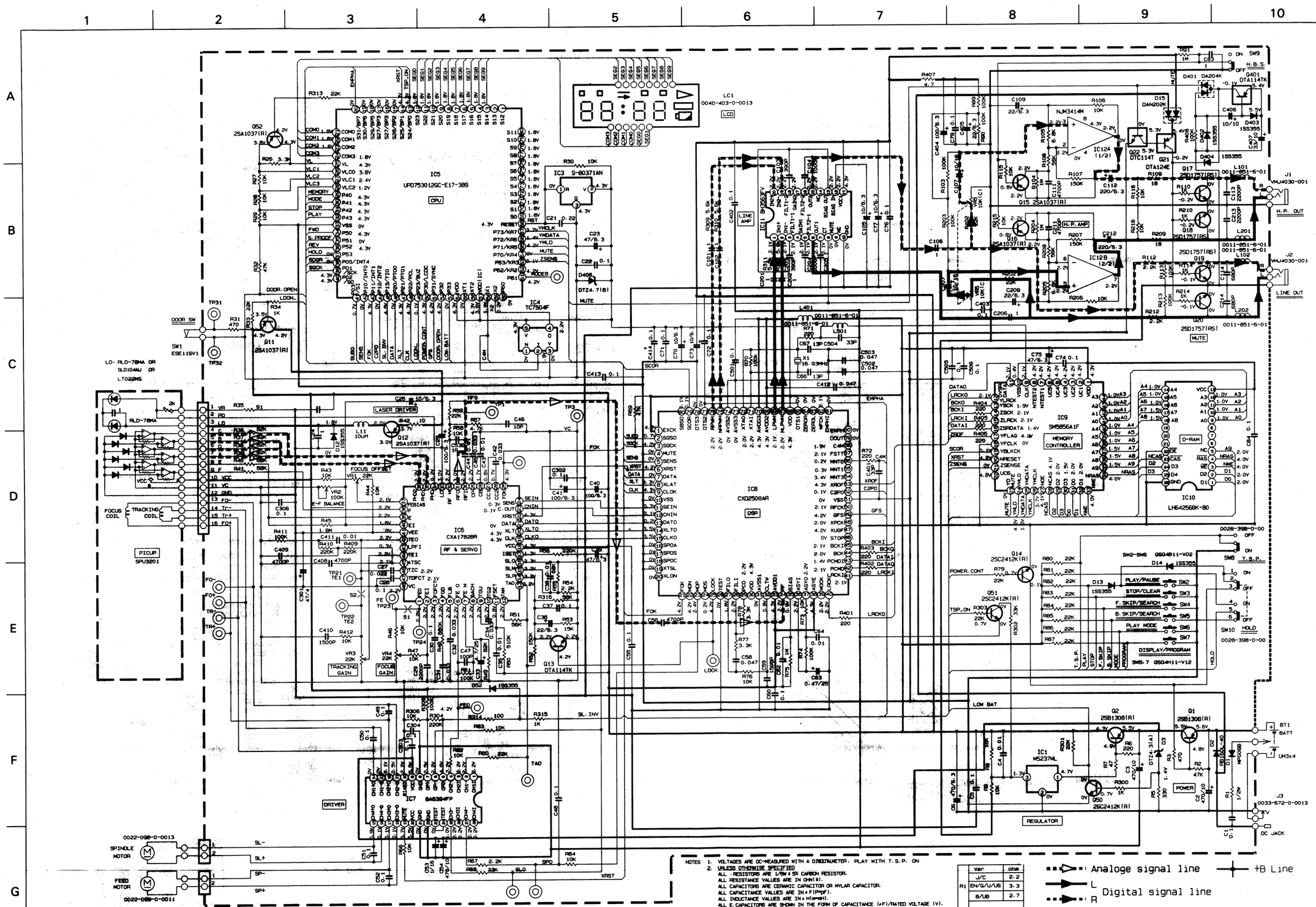


Fig. 7-1

8 Location of P.C. Board Parts and Parts List

■ Top View

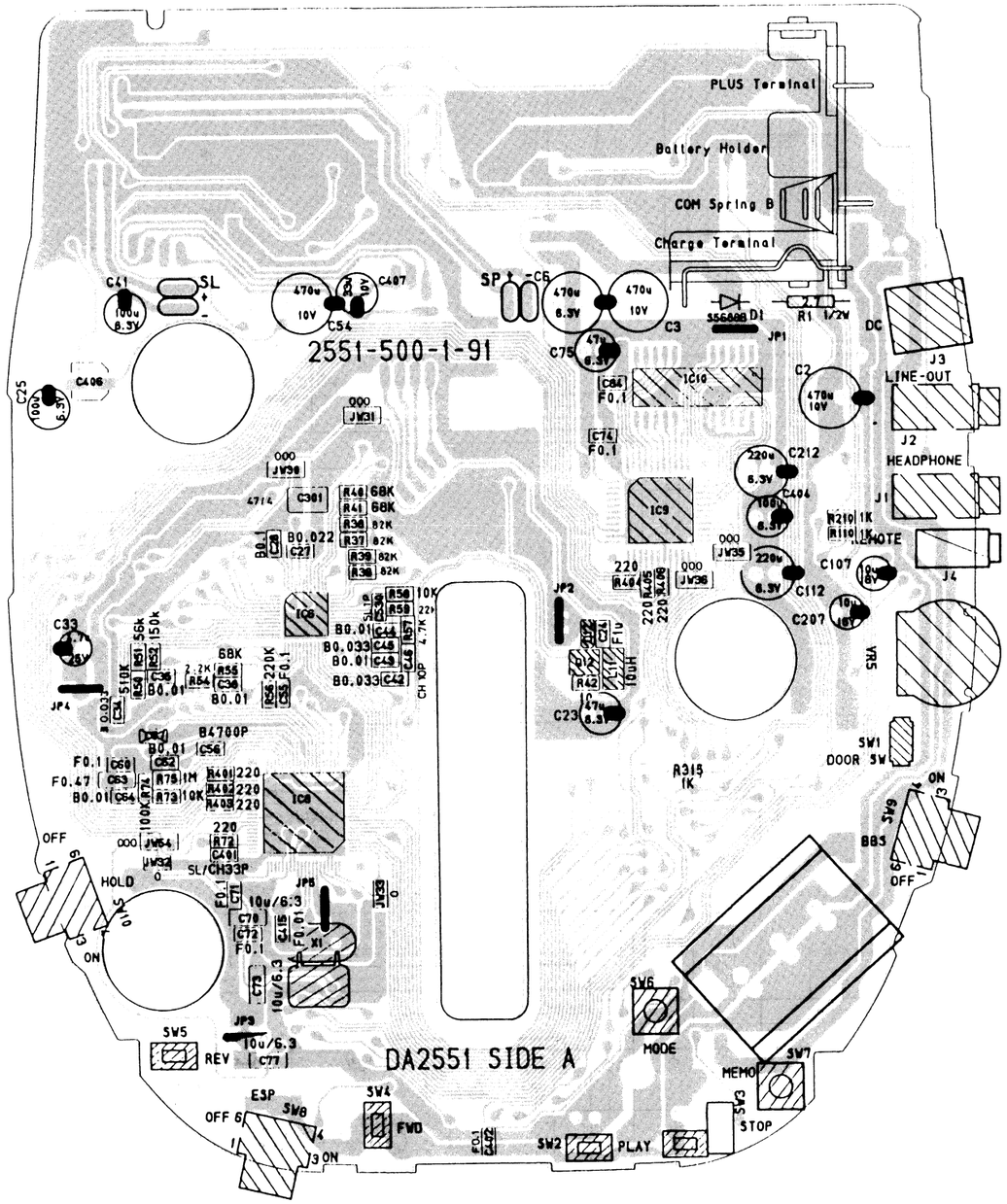


Fig. 8-1

■ Bottom View

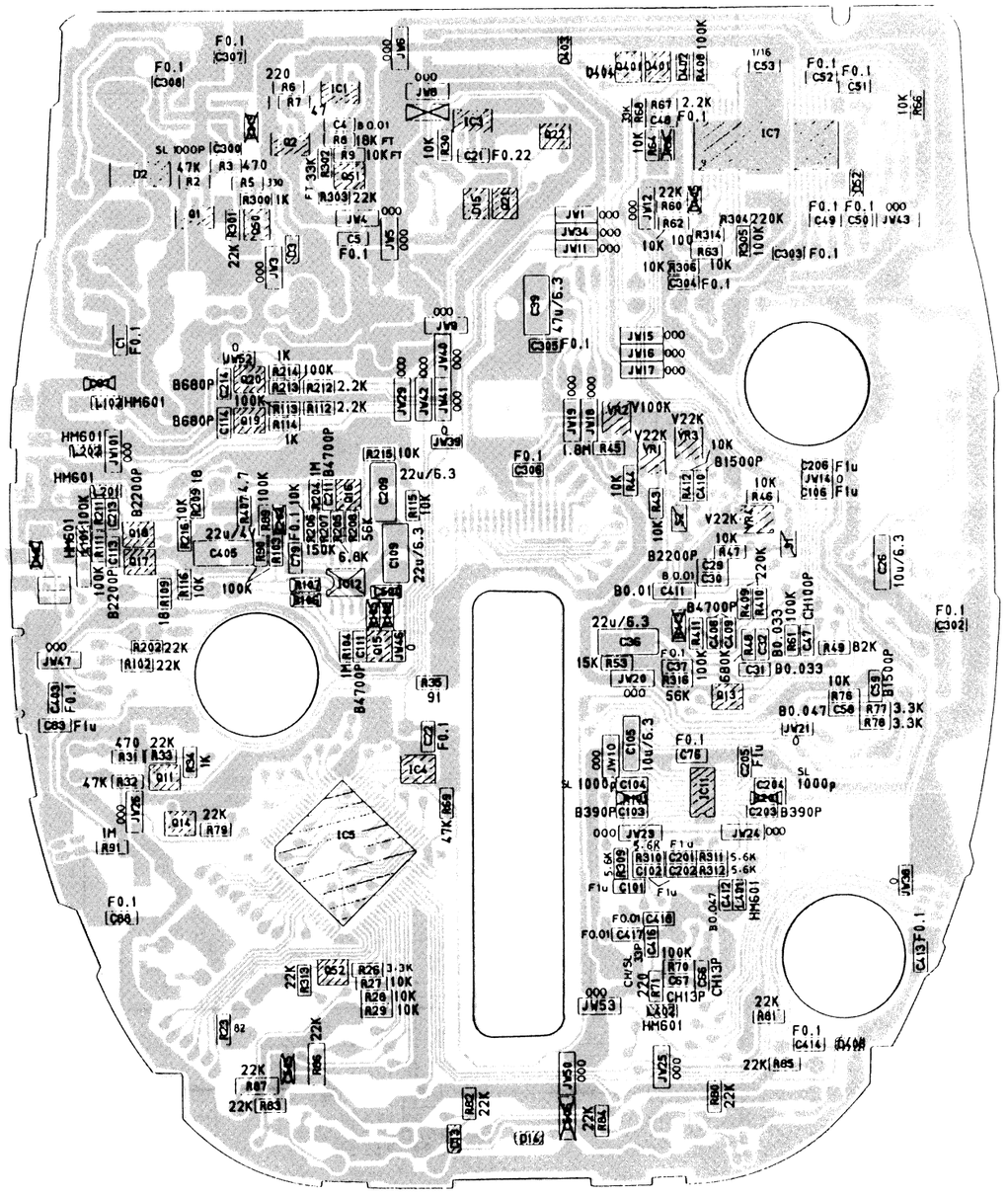
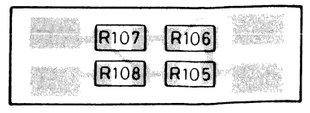


Fig. 8-2

SUB board



BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 001	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 002	QET41AM-477	E.CAPACITOR	470MF 20% 10V	
	C 003	QETA1AM-477N	E.CAPACITOR	470MF 20% 10V	
	C 004	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 005	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 006	QETAOJM-477M	E.CAPACITOR	470MF 20% 6.3V	
	C 021	NCF21EZ-224AY	E.CAPACITOR	.22MF +80:-20%	
	C 022	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 023	QERFOJM-476ZN	E.CAPACITOR	47MF 20% 6.3V	
	C 024	NCF21CZ-105AY	C CAPACITOR	1.0MF +80:-20%	
	C 025	QEKFOJM-107Z	AL E.CAPACITOR	100MF	
	C 026	NEF20JM-106RY	AL E.CAPACITOR	10M 20% 6.3V	
	C 027	NCB21HK-223AY	C CAPACITOR	.022MF 10% 50V	
	C 028	NCB21HK-104	C CAPACITOR	.10MF 10% 50V	
	C 029	NCB21HK-222AY	C CAPACITOR	2200PF 10% 50V	
	C 030	NCB21HK-104	C CAPACITOR	.10MF 10% 50V	
	C 031	NCB21HK-333AY	C CAPACITOR	.033MF 10% 50V	
	C 032	NCB21HK-333AY	C CAPACITOR	.033MF 10% 50V	
	C 033	QEK41EM-475	E.CAPACITOR	?	
	C 034	NCB21HK-333AY	C CAPACITOR	.033MF 10% 50V	
	C 035	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 036	ECSTOJX226R	TS E CAPACITOR		
	C 037	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 038	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 039	ECSTOJC476R	TS E CAPACITOR	?	
	C 041	QEKFOJM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 042	NCB21HK-333AY	C CAPACITOR	.033MF 10% 50V	
	C 043	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 044	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 045	NCB21HK-333AY	C CAPACITOR	.033MF 10% 50V	
	C 046	NCS21HJ-100AY	C CAPACITOR	10PF 50V	
	C 047	NCS21HJ-101AY	C CAPACITOR	100PF 5% 50V	
	C 048	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 049	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 050	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 051	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 052	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 053	ECST1CY105R	TS E CAPACITOR		
	C 054	QET41AM-477	E.CAPACITOR	470MF 20% 10V	
	C 055	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 056	NCB21HK-472AY	C CAPACITOR	4700PF 10% 50V	
	C 058	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V	
	C 059	NCB21HK-152AY	C CAPACITOR	1500PF 10% 50V	
	C 060	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 062	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 063	NCF21EZ-474AY	C CAPASITOR	.47MF +80:-20%	
	C 064	NCB21HK-103AY	C CAPACITOR	.010MF 10% 50V	
	C 066	NCT21CH-130AY	C CAPASITOR	13PF +50:-10% 1	
	C 067	NCT21CH-130AY	C CAPASITOR	13PF +50:-10% 1	
	C 070	ECSTOJX106R	TS E CAPACITOR		
	C 071	NCF21HZ-104AY	C CAPASITOR	.10MF +80:-20%	
	C 072	NCF21HZ-104AY	C-CAPASITOR	.10MF +80:-20%	
	C 073	ECSTOJX106R	TS E CAPACITOR		
	C 074	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 075	QERFOJM-476ZN	E CAPACITOR	47MF 20% 6.3V	
	C 076	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 077	ECSTOJX106R	C CAPACITOR		
	C 079	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 083	NCF21CZ-105AY	C CAPACITOR	1.0MF +80:-20%	
	C 084	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 088	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 101	NCF21CZ-105AY	C CAPASITOR	1.0MF +80:-20%	
	C 102	NCF21CZ-105AY	C CAPACITOR	1.0MF +80:-20%	
	C 103	NCB21HK-391AY	E CAPACITOR	390PF 10% 50V	
	C 104	NCS21HJ-102AY	C CAPACITOR	1000PF 5% 50V	
	C 105	ECSTOJX106R	C CAPACITOR		
	C 106	NCF21CZ-105AY	C CAPACITOR	1.0MF +80:-20%	
	C 107	QEKF1CM-106ZN	E.CAPACITOR	10MF 20% 16V	
	C 109	ECSTOJX226R	E CAPACITOR		
	C 111	NCB21HK-472AY	C CAPACITOR	4700PF 10% 50V	
	C 112	QEKFOJM-227ZN	E.CAPACITOR	220MF 20% 6.3V	
	C 113	NCB21HK-222AY	C CAPACITOR	2200PF 10% 50V	
	C 114	NCB21HK-681AY	C CAPACITOR	680PF 10% 50V	
	C 201	NCF21HZ-105AY	C CAPASITOR	1.0MF +80:-20%	
	C 202	NCF21CZ-105AY	C CAPACITOR	1.0MF +80:-20%	
	C 203	NCB21HK-391AY	C CAPACITOR	390PF 10% 50V	
	C 204	NCB21HK-102AY	C CAPACITOR	1000PF 10% 50V	
	C 205	NCF21CZ-105AY	C CAPACITOR	1.0MF +80:-20%	
	C 206	NCF21CZ-105AY	C CAPACITOR	1.0MF +80:-20%	
	C 207	QEK41CM-106	E.CAPACITOR	10MF 20% 16V	
	C 209	ECSTOJX226R	TS E CAPACITOR		
	C 211	NCB21HK-472AY	C CAPACITOR	4700PF 10% 50V	
	C 212	QEK40JM-227	E.CAPACITOR	220MF 20% 6.3V	
	C 213	NCB21HK-222AY	C CAPACITOR	2200PF 10% 50V	
	C 214	NCB21HK-681AY	C CAPACITOR	680PF 10% 50V	
	C 300	NCS21HJ-102AY	C CAPACITOR	1000PF 5% 50V	
	C 301	ECSTOGX476R	TS E CAPACITOR		
	C 302	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 303	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 304	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 305	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 306	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 401	NCS21HJ-330AY	C CAPACITOR	33PF 5% 50V	
	C 402	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 403	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 404	QEKFOJM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 405	ECSTOJX226R	TS E CAPACITOR		
	C 406	QEK41CM-106	E.CAPACITOR	10MF 20% 16V	
	C 407	QEKF1AM-336ZN	E.CAPACITOR	33MF 20% 10V	
	C 408	NCB21HK-472AY	C CAPACITOR	4700PF 10% 50V	
	C 409	NCB21HK-472AY	C CAPACITOR	4700PF 10% 50V	
	C 410	NCB21HK-152AY	C CAPACITOR	1500PF 10% 50V	
	C 411	NCB11HK-103AY	C.CAPA. C.M	.010MF 10% 50V	
	C 412	NCB21HK-473AY	C CAPACITOR	.047MF 10% 25V	
	C 413	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 414	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	C 415	NCB21HK-103AY	C CAPACITOR	.010MF 10% 25V	
	C 416	NCS21HJ-330AY	C CAPACITOR	33PF 5% 50V	
	C 417	NCB21HK-103AY	C CAPACITOR	.010MF 10% 25V	
	C 418	NCB21HK-103AY	C CAPACITOR	.010MF 10% 25V	
	C 530	NCS21HC-1R0AY		1.0PF 50V	
	C 600	NCF21HZ-104AY	C CAPACITOR	.10MF +80:-20%	
	D 001	MPG06B	DIODE		
	D 002	RB160L-40	DIODE		
	D 003	DTZ4.3A	ZENER DIODE		
	D 012	1SS355	DIODE		
	D 013	1SS355	DIODE		
	D 014	1SS355	DIODE		
	D 015	DAN202KT146	DIODE		
	D 052	1SS355	DIODE		

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	D 401	DA204K	DIODE		
	D 402	1SS355	DIODE		
	D 403	1SS355	DIODE		
	D 404	1SS355	DIODE		
	D 406	DTZ4.7(B)-X	ZENER DIODE		
	IC001	M5237ML	IC		
	IC003	RH5VL31AA-T1	IC	S-80731AN-DV-T1	
	IC004	TC7S04FTE85L	IC		
	IC005	UPD753012GC-E17	IC	NEC VERSION 3B9	
	IC006	CXA1782BR	IC		
	IC007	BA6394FP	IC		
	IC008	CXD2508AR	IC		
	IC009	SM5856A1F	IC		
	IC010	LH64256BK-80	IC		
	IC011	BH3563FV	IC		
	IC012	NJM3414M	IC		
	J 001	VMJ4030-001	JACK		
	J 002	VMJ4030-001	JACK		
	J 003	0033-672-0-0013			
	JW001	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW002	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW003	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW004	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW005	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW006	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW008	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW009	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW010	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW011	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW012	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW014	NRSA02J-ORONY	MG RESISTOR	5% 1/10W	
	JW015	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW016	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW017	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW018	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW019	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW020	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW021	NRSA02J-ORONY	MG RESISTOR	5% 1/10W	
	JW022	NRSA02J-ORONY	MG RESISTOR	5% 1/10W	
	JW023	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW024	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW025	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW026	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW029	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW030	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW031	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW032	NRSA02J-ORONY	MG RESISTOR	5% 1/10W	
	JW033	NRSA02J-ORONY	MG RESISTOR	5% 1/10W	
	JW034	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW035	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW036	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW038	NRSA02J-ORONY	MG RESISTOR	5% 1/10W	
	JW039	NRSA02J-ORONY	MG RESISTOR	5% 1/10W	
	JW040	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW041	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW042	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW043	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW046	NRSA02J-ORONY	MG RESISTOR	5% 1/10W	
	JW047	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW050	NRS181J-ORONY	MG RESISTOR	5% 1/8W	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	JW052	NRSA02J-ORONY	MG RESISTOR	5% 1/10W	
	JW053	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW054	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW078	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW101	NRS181J-ORONY	MG RESISTOR	5% 1/8W	
	JW317	NRSA02J-ORONY	MG RESISTOR	5% 1/10W	
	L 011	0996-061-0-05	COIL		
	L 101	0011-851-6-01	COIL		
	L 102	0011-851-6-01	COIL		
	L 201	0011-851-6-01	COIL		
	L 202	0011-851-6-01	COIL		
	L 401	0011-851-6-01	COIL		
	L 402	0011-851-6-01	COIL		
	LC001	0040-403-0-0013	LCD		
	Q 001	2SB1308(R)	TRANSISTOR		
	Q 002	2SB1308(R)	TRANSISTOR		
	Q 011	2SA1037K(R)	TRANSISTOR		
	Q 012	2SA1037K(R)	TRANSISTOR		
	Q 013	DTA114TKK1	TRANSISTOR		
	Q 014	2SC2412KK1	TRANSISTOR		
	Q 015	DTA114TKK1	TRANSISTOR		
	Q 016	DTA114TKK1	TRANSISTOR		
	Q 017	2SD1757K(RS)	TRANSISTOR		
	Q 018	2SD1757K(RS)	TRANSISTOR		
	Q 019	2SD1757K(RS)	TRANSISTOR		
	Q 020	2SD1757K(RS)	TRANSISTOR		
	Q 021	DTA124EKT146	TRANSISTOR		
	Q 022	DTC114TKT146	TRANSISTOR		
	Q 050	2SC2412KK1	TRANSISTOR		
	Q 051	2SD1757K(RS)	TRANSISTOR		
	Q 052	2SA1037K(R)	TRANSISTOR		
	R 001	QRD129J-3R3	C RESISTOR	3.3 5% 1/2W	EN,G,US,U
	R 001	QRD129J-2R7	C RESISTOR	2.7 5% 1/2W	C,B,J,UB
	R 002	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 003	NRSA02J-471NY	MG RESISTOR	470 5% 1/10W	
	R 005	NRSA02J-331NY	MG RESISTOR	330 5% 1/10W	
	R 006	NRSA02J-221NY	MG RESISTOR	220 5% 1/10W	
	R 007	NRSA02J-470NY	MG RESISTOR	47 5% 1/10W	
	R 008	NRSA02J-183NY	MG RESISTOR	18K 5% 1/10W	
	R 009	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 026	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 027	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 028	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 029	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 030	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 031	NRSA02J-471NY	MG RESISTOR	470 5% 1/10W	
	R 032	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 033	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 034	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 035	NRSA02J-910NY	RES. C.M	91 5% 1/10W	
	R 036	NRSA02J-823NY	MG RESISTOR	82K 5% 1/10W	
	R 037	NRSA02J-823NY	MG RESISTOR	82K 5% 1/10W	
	R 038	NRSA02J-823NY	MG RESISTOR	82K 5% 1/10W	
	R 039	NRSA02J-823NY	MG RESISTOR	82K 5% 1/10W	
	R 040	NRSA02J-683NY	MG RESISTOR	68K 5% 1/10W	
	R 041	NRSA02J-683NY	MG RESISTOR	68K 5% 1/10W	
	R 042	NRSA02J-100NY	MG RESISTOR	10 5% 1/10W	
	R 043	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 044	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 045	NRSA02J-185NY	MG RESISTOR	1.8M 5% 1/10W	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 046	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 047	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 048	NRSA02J-684NY	MG RESISTOR	680K 5% 1/10W	
	R 049	NRSA02J-823NY	MG RESISTOR	82K 5% 1/10W	
	R 050	NRSA02J-514NY	MG RESISTOR	510K 5% 1/10W	
	R 051	NRSA02J-563NY	MG RESISTOR	56K 5% 1/10W	
	R 052	NRSA02J-154NY	MG RESISTOR	150K 5% 1/10W	
	R 053	NRSA02J-153NY	MG RESISTOR	15K 5% 1/10W	
	R 054	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 055	NRSA02J-683NY	MG RESISTOR	68K 5% 1/10W	
	R 056	NRSA02J-224NY	MG RESISTOR	220K 5% 1/10W	
	R 057	NRSA02J-472NY	MG RESISTOR	4.7K 5% 1/10W	
	R 058	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 059	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 060	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 061	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 062	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 063	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 064	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 066	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 067	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 068	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
	R 069	NRSA02J-473NY	MG RESISTOR	47K 5% 1/10W	
	R 070	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 071	NRSA02J-221NY	MG RESISTOR	220 5% 1/10W	
	R 072	NRSA02J-221NY	MG RESISTOR	220 5% 1/10W	
	R 073	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 074	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 075	NRSA02J-105NY	MG RESISTOR	1.0M 5% 1/10W	
	R 076	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 077	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 078	NRSA02J-332NY	MG RESISTOR	3.3K 5% 1/10W	
	R 079	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 080	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 081	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 082	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 083	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 084	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 085	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 086	NRS181J-223NY	MG RESISTOR	22K 5% 1/8W	
	R 087	NRS181J-223NY	MG RESISTOR	22K 5% 1/8W	
	R 089	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 090	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 091	NRSA02J-105NY	M.G.RESISTOR	1M 5% 1/10W	
	R 102	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 103	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 104	NRSA02J-105NY	MG RESISTOR	1.0M 5% 1/10W	
	R 105	NRSA02J-682NY	MG RESISTOR	6.8K 5% 1/10W	
	R 106	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 107	NRSA02J-154NY	MG RESISTOR	150K 5% 1/10W	
	R 108	NRSA02J-563NY	MG RESISTOR	56K 5% 1/10W	
	R 109	NRSA02J-180NY	MG RESISTOR	18 5% 1/10W	
	R 110	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 111	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 112	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 113	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 114	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 115	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 116	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 202	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	

BLOCK NO. 01

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 203	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
	R 204	NRSA02J-105NY	MG RESISTOR	1.0M 5% 1/10W	
	R 205	NRSA02J-682NY	MG RESISTOR	6.8K 5% 1/10W	
	R 206	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 207	NRSA02J-154NY	MG RESISTOR	150K 5% 1/10W	
	R 208	NRSA02J-563NY	MG RESISTOR	56K 5% 1/10W	
	R 209	NRSA02J-180NY	MG RESISTOR	18 5% 1/10W	
	R 210	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 211	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 212	NRSA02J-222NY	MG RESISTOR	2.2K 5% 1/10W	
	R 213	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 214	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 215	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 216	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 300	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 301	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 302	NRSA02J-333NY	MG RESISTOR	33K 5% 1/10W	
	R 303	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 304	NRSA02J-224NY	MG RESISTOR	220K 5% 1/10W	
	R 305	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 306	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	R 309	NRSA02J-562NY	MG RESISTOR	5.6K 5% 1/10W	
	R 310	NRSA02J-562NY	MG RESISTOR	5.6K 5% 1/10W	
	R 311	NRSA02J-562NY	MG RESISTOR	5.6K 5% 1/10W	
	R 312	NRSA02J-562NY	MG RESISTOR	5.6K 5% 1/10W	
	R 313	NRSA02J-223NY	MG RESISTOR	22K 5% 1/10W	
	R 314	NRSA02J-101NY	MG RESISTOR	100 5% 1/10W	
	R 315	NRSA02J-102NY	MG RESISTOR	1.0K 5% 1/10W	
	R 316	NRSA02J-563NY	MG RESISTOR	56K 5% 1/10W	
	R 401	NRSA02J-221NY	MG RESISTOR	220 5% 1/10W	
	R 402	NRSA02J-221NY	MG RESISTOR	220 5% 1/10W	
	R 403	NRSA02J-221NY	MG RESISTOR	220 5% 1/10W	
	R 404	NRSA02J-221NY	MG RESISTOR	220 5% 1/10W	
	R 405	NRSA02J-221NY	MG RESISTOR	220 5% 1/10W	
	R 406	NRSA02J-221NY	MG RESISTOR	220 5% 1/10W	
	R 407	NRSA02J-4R7NY	MG RESISTOR	4.7 5% 1/10W	
	R 408	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 409	NRSA02J-224NY	MG RESISTOR	220K 5% 1/10W	
	R 410	NRSA02J-224NY	MG RESISTOR	220K 5% 1/10W	
	R 411	NRSA02J-104NY	MG RESISTOR	100K 5% 1/10W	
	R 412	NRSA02J-103NY	MG RESISTOR	10K 5% 1/10W	
	SW001	0028-060-0-00		ESW11SV1	
	SW002	QSQ4B11-V02	TACT SWITCH		
	SW003	QSQ4B11-V02	TACT SWITCH		
	SW004	QSQ4B11-V02	TACT SWITCH		
	SW005	QSQ4B11-V02	TACT SWITCH		
	SW006	QSQ4H11-V12Z	TACT SWITCH		
	SW007	QSQ4H11-V12Z	TACT SWITCH		
	SW008	0028-398-0-00	SLIDE SWITCH		
	SW009	0028-398-0-00	SLIDE SWITCH		
	SW010	0028-398-0-00	SLIDE SWITCH		
	VR001	9032-404-2-23	VOLUME		
	VR002	9032-404-1-04	VOLUME		
	VR003	9032-404-2-23	VOLUME		
	VR004	9032-404-2-23	VOLUME		
	VR005	0031-645-1-03	MAIN VOLUME		
	X 001	0038-964-0-00	CERAMIC		

9 Exploded View of Enclosure Parts

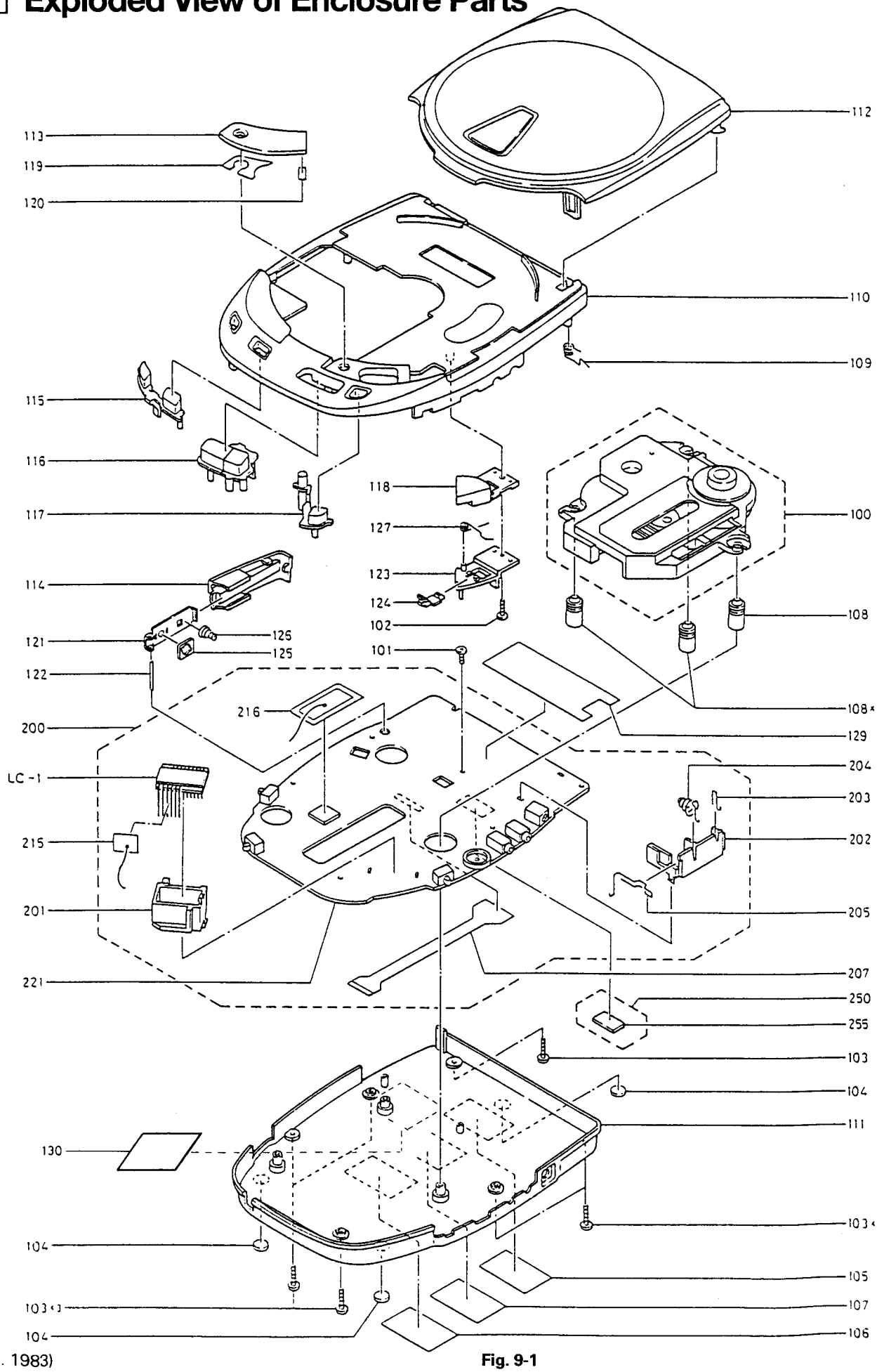


Fig. 9-1

● Enclosure Parts List

BLOCK NO. M1MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	100	----------	CD MECHA. UNIT		1		
	101	SPSJ1740N	SCREW		1		
	102	SPSJ1740M	SCREW		1		
	103	95950000T	SCREW		6		
	104	1105-885-0-00	RUBBER FOOT		3		
	105	2511-850-0-62	NAME PLATE		1	B,C,EN,G,J	
		2511-850-0-63	NAME PLATE		1	U,US,UB	
	106	2511-851-0-01	DHHS LABEL		1	C,J	
		0074-227-0-00	CAUTION LABEL		1	B,EN,G,US	
	107	0074-154-0-00	WARNING LABEL	CLASS 1 LABEL	1	B,EN,G,US	
		2549-852-0-00	CAUTION LABEL	NI-CD & FCC	1	C,J	
	108	2528-300-0-00	RUBBER CHUTION		3		
	109	2550-404-0-00	TOTION SPRING		1		
	110	2549-801-1-02	CASE(TOP CAVER)		1		
	111	2549-813-2-01	CASE B (BOTTOM)		1		
	112	2549-805-0-02	CD DOOR		1		
	113	2549-808-0-01	LCD WINDOW		1		
	114	2549-817-0-01	BATTERY COVER		1		
	115	2549-860-0-02	T.SWITCH KNOBA		1		
	116	2549-861-0-02	T.SWITCH KNOB B		1		
	117	2549-862-0-01	T.SWITCH KNOB C		1		
	118	2549-863-1-01	OPEN BUTTON		1		
	119	2549-881-0-00	DOUBLE FACE		1		
	120	2549-882-0-00	DOUBLE FACE		1		
	121	2549-130-0-00	BATTERY TERMINA		1		
	122	2550-200-0-00	TERMINAL SHAFT		1		
	123	2550-272-1-00	LOCK HOLDER		1		
	124	2550-273-0-00	LOCK LEVER		1		
	125	2550-274-0-00	TERMINAL SPACER		1		
	126	2549-401-0-00	SPL SPLING A		1		
	127	2550-405-0-00	TORTION SPRING		1		
	129	2549-885-0-00	INSULATOR SHEET		1		
	130	2549-850-0-00	SAFETY LABEL		1	B,EN,G	
	200	2557-001-0-00	CD AMP UNIT	NON SERVICE	1		
	201	2550-270-0-02	LCD HOLDER		1		
	202	2550-271-0-00	TERMINAL HOLDER		1		
	203	2550-400-0-00	PLUS TERMINAL		1		
	204	2550-402-0-00	COM.SPRING B		1		
	205	2550-403-0-00	CHAGE TERMINAL		1		
	207	2596-500-0-91	FREXIBLE WIRE	PICKUP	1		
	215	2551-530-0-00	SHIELD PLATE		1		
	216	2552-530-0-00	SHIELD PLATE		1		
	221	----------	CD AMP BOARD		1		
	250	----------	SUB AMP UNIT		1		
	255	----------	SUB AMP BOARD		1		
	LC- 1	0040-403-0-0013	LCD		1		

10 Exploded View of Mechanism Parts

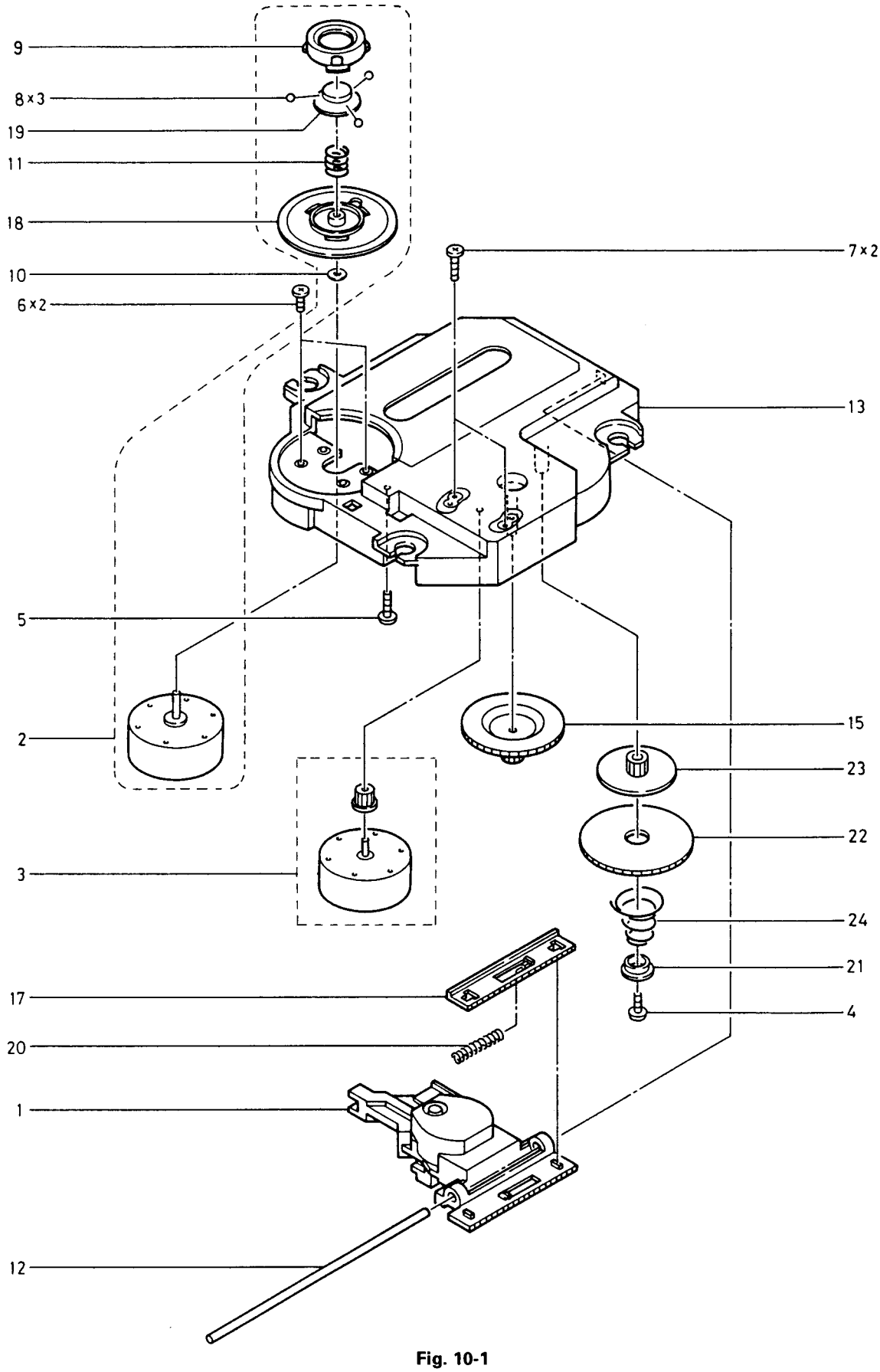


Fig. 10-1

● Mechanism Parts List

BLOCK NO. M2MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1	0020-016-0-0001	LASER PICKUP		1		
	2	2596-601-0-00	MOTOR ASS'Y	SPINDLE	1		
	3	2596-602-0-00	MOTOR ASS'Y	FEED	1		
	4	0973-220-0-55	SCREW		1		
	5	0973-220-0-85	SCREW		1		
	6	0974-954-4-05	SCREW		2		
	7	0974-954-7-03	SCREW		2		
	8	0989-503-0-00	STEEL BALL		3		
	9	2516-271-0-00	CENTER TABLE		1		
	10	2595-300-0-00	WASHER	1.95X5X0.13	1		
	11	2595-400-1-00	COM SPRING		1		
	12	2596-200-0-00	SHAFT		1		
	13	2596-250-0-00	MECHA.CHASSIS		1		
	15	2596-261-0-00	GEAR A		1		
	17	2596-263-0-00	SUB LUCK		1		
	18	2596-270-0-00	TURN TABLE		1		
	19	2596-272-0-00	KNOB		1		
	20	2596-401-0-00	CAM SPRING		1		
	21	2596-264-0-00	CAP		1		
	22	2596-265-0-00	GEAR C		1		
	23	2596-266-0-00	GEAR D		1		
	24	2596-402-0-00	COMP. SPRING		1		

11 Packing Illustration and Parts List

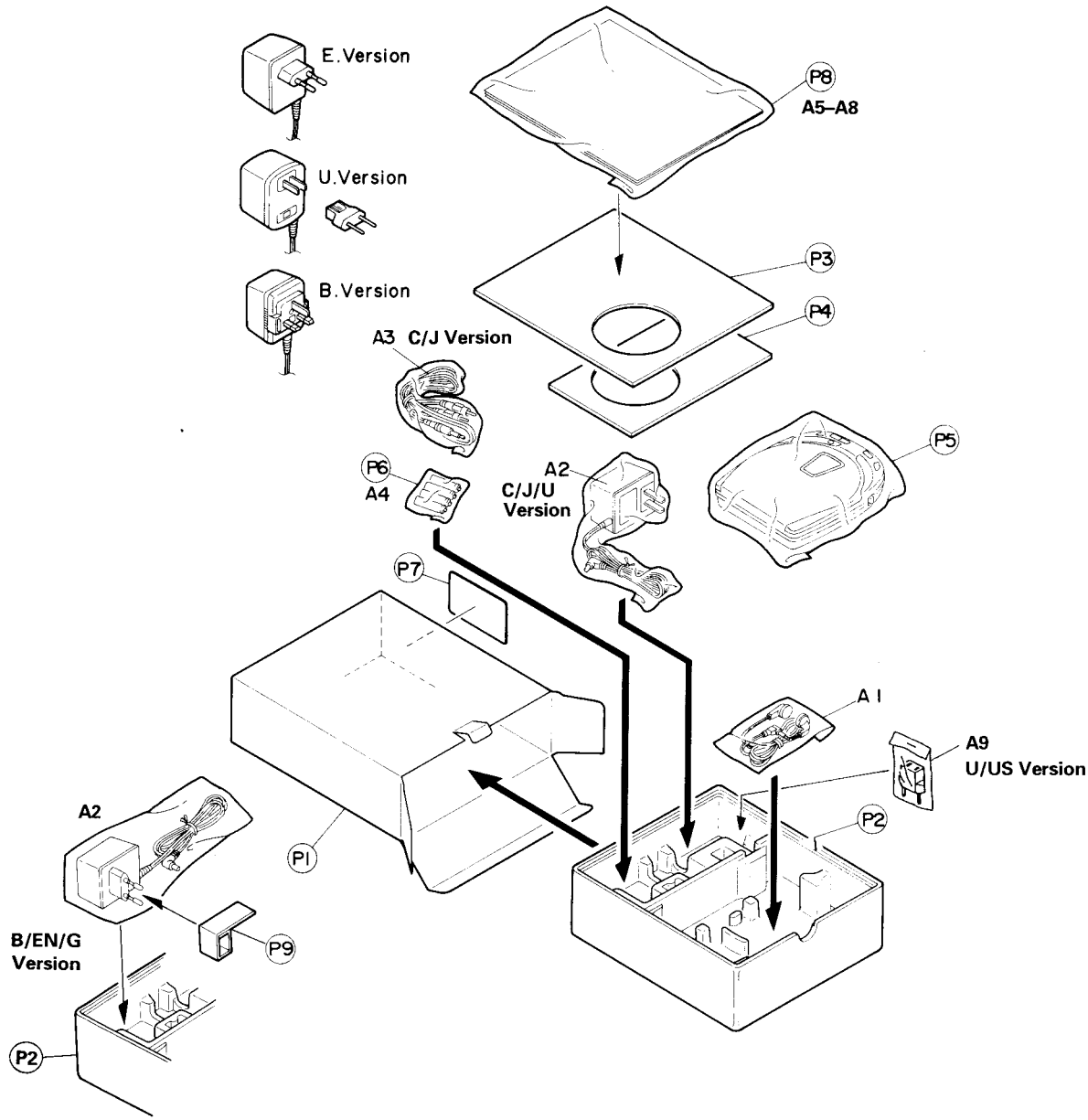


Fig. 11-1

● Packing Parts List

BLOCK NO. M3MM□□□

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	P 1	2552-911-0-01	GIFT BOX		1	C,J	
		2552-911-0-02	GIFT BOX		1	B,EN,G	
		2552-911-0-02	GIFT BOX		1	U,UB,US	
	P 2	2549-901-0-00	CUSHION	STYLOFORM	1		
	P 3	2520-907-1-00	SPACER C		1		
	P 4	2520-908-1-00	SPACER D		1		
	P 5	VPE3005-042	POLY BAG	FOR SET	1		
	P 6	0998-005-7-00	POLY BAG		1		
	P 7	----------	CARTON LABEL		1		
	P 8	0083-985-0-00	POLY BAG	FOR INSTRUC	1		
	P 9	2510-905-0-00	PACKING SPACER		1	B,EN,G	

● Accessories Parts List

BLOCK NO. M3MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A 1	0025-526-0-02	HEADPHONES		1		
	A 2	0027-194-0-0313	AC ADAPTOR		1	C,J	
		0027-195-0-0313	AC ADAPTOR		1	EN,G	
		0027-198-0-0313	AC ADAPTOR		1	U,US	
		VGB0060-016	AC ADAPTOR		1	B,UB	
	A 3	VMP0127-001J	LINE CORD		1	C,J	
	A 4	VGZ006A-002	RECHARG.BATTERY		4	B,EN,G	
		VGZ006A-002	RECHARG.BATTERY		4	U,UB,US	
		VGZ006B-002	RECHAGE.BATTERY		4	C,J	
	A 5	VNN9276-112H	INSTRUCTIONS	2552-920-0-06	1	U	
		VNN9276-251H	INSTRUCTIONS	2552-920-0-03	1	EN	
		VNN9276-261H	INSTRUCTIONS	2552-920-0-04	1	EN,G	
		VNN9276-271H	INSTRUCTIONS	2552-920-0-05	1	EN	
		VNN9276-611H	INSTRUCTIONS	2552-920-0-01	1	C,J	
		VNN9276-671H	INSTRUCTIONS	2552-920-0-02	1	B	
	A 6	BT-20047F	WARRANTY CARD		1	J	
		BT-20066A	WARRANTY CARD		1	B	
		BT-52002-1	WARRANTY CARD		1	C	
		BT-54003-1	WARRANTY CARD		1	B	
		BT-20135	WARRANTY CARD		1	G	
	A 7	BT-20137	SERVICE NETWORK		1	J	
		BT-20071B	SVC CENTER LIST		1	C	
	A 8	BT-20044G	SAFETY INST.		1	J	
		E43486-340B	SAFETY INST SHE		1	B	